YACHTING

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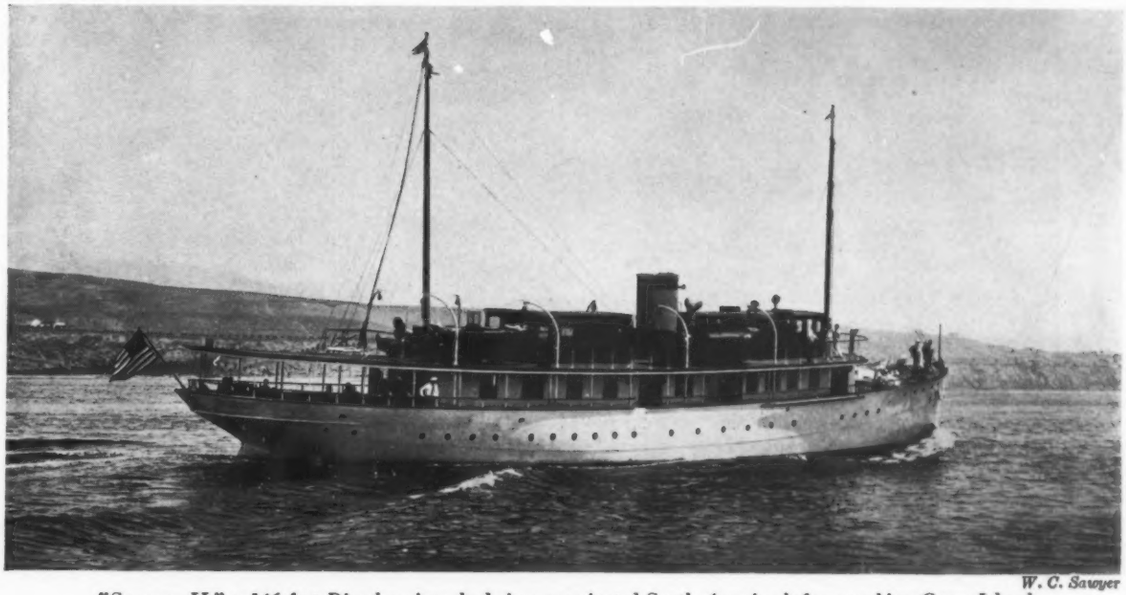


W. C. Sawyer

"Samona II," a 146-foot Diesel cruiser, had circumnavigated South America before reaching Cocos Island

The Isle of Enchanted Legend

The Crew of "Samona II" Take a 2000-Pound Sea Bat in the Waters off Cocos Island

By JOHN VANDERVEER DEUEL

NORTH from Patagonia *Samona II* sailed — north in the cold Humboldt Current that sweeps the rugged, inhospitable western face of the great South American continent. Days are not so far distant when sailing ships of traders, discoverers and privateers drifted up and down this desolate and lonely shore; much of the romance of this great white-winged fleet lies between Panama and the Horn.

Far beyond the distant sea rim lies a treasure island — a tiny speck in the Pacific, 600 miles west-southwest of Balboa, Panama, and almost equidistant north-northeast of the Galapagos group. We seek not doubloons — that is, no one save myself — yet our course is so plotted as to intercept this tiny isle of enchanted legend.

It was not exactly over prairie waters that we rolled over the Pacific to Cocos Island. "Let go!" called the Captain from the bridge, and our anchor slid down through crystal clear water to grab the coral far below amid the sharks. We were only about 300 feet offshore, moored in Chatham Bay.

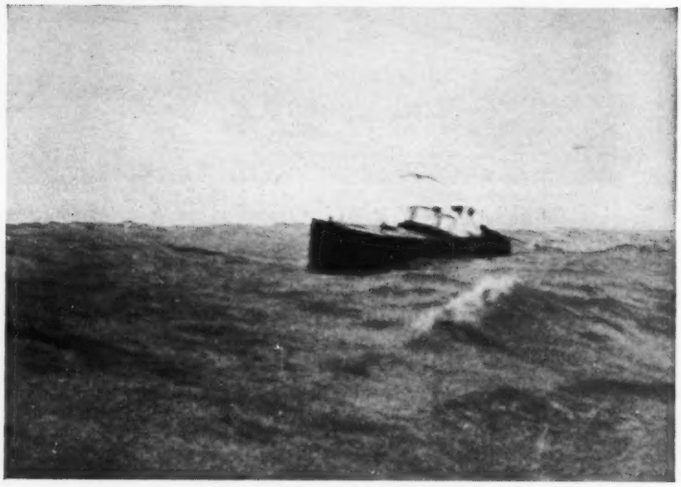
Cocos is a veritable treasure island; for centuries it was known only to those who followed the sea; pirates, merchant vessels and explorers shared and shared alike here on this isle of countless legends. And yet, paradise though it is, none of those who have reached its shores have cared to dwell amid the tropic beauty of Cocos; it is as yet uninhabited save for wild hogs and birds.

On going ashore through the surf, we had only to step through the fringe of cocoanut palms beyond the white sand of the beach to encounter a huge pool into which a roaring cataract leaped from the seclusion of the jungle high above. Here the freebooters came to bury their loot, and much of it is still believed to remain — but try to find it. Yes, even Inca gold from the Peruvian Andes came here in the long ago. In this same crystal pool in which we splash, mariners have washed their clothes, bathed and replenished their ship's water supply for untold decades. Names and dates carved in the rocks include some well-known ships and noblemen of bygone years.

Ferns, palms, vines and flowering trees change their beauty with the rapidly changing lights of Cocos; a jungle more dense even than that of Matto Grosso has covered everything. Rain storms accompanied by thunder and lightning occur every other hour. High, rugged shores whence spring a thousand waterfalls; jagged cliffs and limpid pools; hourly changing cloud and sun formations beautiful beyond description. Such is Cocos — a deserted and lonely paradise.

Now a favorite rendezvous of American yachtsmen, the rocks and cliffs about Chatham Bay emphasize this fact, for upon their surface are painted the names of

The mouth of the giant sea bat. The huge creature measured 21 feet across



Right. "Samona's" launch just after striking the sea bat

many famous American yachts from both Atlantic and Pacific ports. One yachtsman even brought a load of domestic chickens and ducks and planted them on the island so that stranded mariners in the future will be able to find fare other than cocoanuts and wild hogs.

Fish are found in abundance around Cocos but it is difficult to land them before they are torn from the line by the sharks. Big sharks, twelve and sixteen feet in length, await the opportunity to grab the catch. We would speed up the motor launch and travel five miles with the hope of leaving them behind, but the odor from the fish tanks inspired them to speed up, too, and they traveled beside us like guardian angels. The taste of blood maddened them and the big fellows fought desperately among themselves for the spoils. Losing all fear, they would come right up to the side of the boat and snatch the catch from our very hands; they will take the latter, too, if you don't get them out of reach in a hurry. Usually, they cut the fish just behind the gills, leaving a ragged semicircle where their powerful jaws have whacked off sixty pounds or more; they were always considerate enough to leave the head. Those devils were hungry and they followed us as we went ashore in the skiff until the water was so shallow that they took a chance of the receding waves leaving their giant, leather carcasses stranded. Indeed, they were not merely curious when they pawed the sand in barely a foot of water. In the clear, quiet water beneath the *Samona*, they oozed back and forth with majestic grace, and when I dropped refuse to them they came like an army of torpedoes shot from a hundred different points.

We came to Cocos primarily to procure a rare species of giant sea bat which inhabits the waters about the island, and the morning after our arrival we were all up early, eager to set out for the capture. We divided into two separate expeditions. In one launch was Willits J. Hole, owner of the *Samona II*, who is one of the most ardent yachtsmen on the Pacific Coast, and who ranks near the top among the big game fishermen of the world. With him were Frank, the boatman, Gillie, a deckhand who was lookout and harpooner, and myself, together with enough equipment to sink a battleship.

The early mornings at the island are quiet and the sea is like glass. Should the black clouds give way and allow the sun to filter through, Cocos presents a scene of peace and grandeur — a palm-fringed shore line with a background of orange-green jungle whose mass of green is broken only by the white trail of a cataract that leaps from the cliffs — a scene that is in substance the very essence of every yachtsman's fanciful dreams of his South Sea paradise.

A quarter of a mile from the *Samona II* we located two bats, their size almost unbelievable as they winged their way along close to the surface, basking in the early morning sun. They looked like some great prehistoric monsters. Our large steel harpoons had been especially constructed, but, even so, the chance of one remaining firmly in the bat was slight unless the man holding the harpoon leaped quickly to the creature's back and thrust it clear through; the hide is tougher even than shark skin. It was difficult, however, to get very close, and we decided to try throwing the harpoon. With the three-quarter-inch harpoon line coiled so that it would not foul, and Gillie tied to the bow, W. J. gave orders for full speed ahead.

Our only chance lay in coming upon the bat with

great speed, thereby surprising him. Over the seas the big launch roared through a streak of spray as we aimed directly for the center of that vast expanse of "fish." "Throw it!" yelled W. J. At first I thought we had missed, but the line payed out rapidly and, when it took up tight on the bitt, I knew without a doubt that we "had sump'n." The launch nearly capsized as we started in a series of dizzy circles — the battle was on. A few circles and the old boy leaped clear of the water and shook himself, bringing the line taut with a snap which threw us all in a heap in the bottom of the boat. Under the launch he went, banging us on the way with his flippers and deluging us with spray. Then around and around the boat he galloped along the surface, the line tearing windshield and coaming from the launch, while we were all busy jumping the line to keep from being pinned in a corner and crushed.

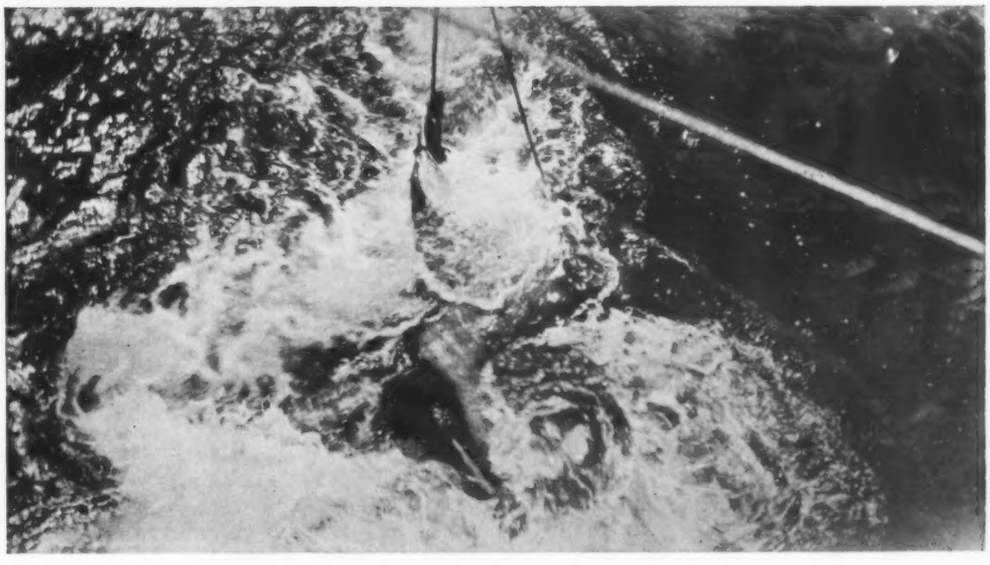
"Give him more scope — get a line fast to the stern bitt!" yelled W. J. We finally payed out more line and got him fastened to the stern bitt. Frank threw the motor in gear to try to hold him, but at half speed ahead he was still carrying us backward and seaward. With the 50-horsepower motor pulling in one direction and a 2,000-pound monster tugging in the opposite direction, the stern bitt threatened to let go under the terrific pressure and we dared not try and hold him with full throttle. With the motor running half speed ahead, we were towed backward seven miles to sea.

Occasionally the monster stopped his straightaway course to leap high in the air or to thrash furiously on the surface. Then he angled off around the end of the island and we cut off the motor and just let him fight. For seven or eight miles he proceeded in this direction, attacking the launch at intervals and banging us with his big, bat-like wings. Once he rammed the side and beat violently with his big flippers, nearly capsizing the boat and striking W. J. a nasty blow on the shoulder that sent him flying into a corner of the cockpit in a heap. Then he took to striking at the bottom of the boat — diving deep, then rushing up vertically at us. We all watched and when we saw the bat coming from the depths we gave the motor the gas, hoping to fool him, but several times he made good his aim. When he struck the propeller, he stopped the motor. Sharks by the dozen lay waiting for the moment he would expire, not daring to touch the old boy while he still had any fight in him. We were trying to tire him, but he was tiring us. The boys had worn blisters on their hands and at any moment we feared the overtaxed line or harpoon would give way.

During the fight we had been carried far out to sea, out beyond the shelter of the island, and a familiar Cocos squall had whipped the ocean into a great heaving mass which added to our already difficult situation. The odor of raw flesh continually increased the number of sharks that swarmed about. W. J. decided that our only hope of success lay in an additional harpoon. Under difficulties, we succeeded in getting the harpoon in four times, only to have the iron pull out under the bat's furious spasms of threshing. At last Gillie hurled

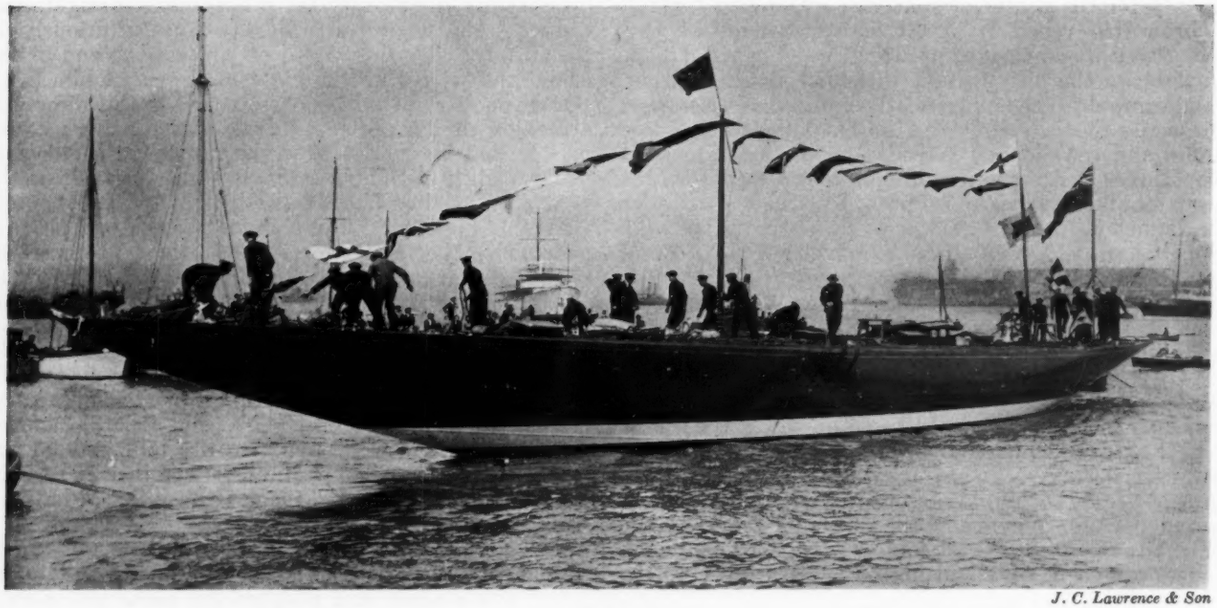
(*Continued on page 100*)

Left. Steel harpoons bent and twisted in the battle. W. J. Hole, owner of "Samona II" and West Coast sportsman (right), and Albert E. Colburn



"The bat was tiring rapidly and his threshing grew less violent"

"Endeavour," the Fifteenth Challenger



J. C. Lawrence & Son

"Endeavour," T. O. M. Sopwith's Class J yacht which will meet the American defender next September, was launched from the yard of her builders, Camper & Nicholson, Gosport, England, on April 16th. She is a sweet looking craft, with a graceful sheer and well formed ends, altogether the most dangerous looking yacht Nicholson has designed

Central Press Photos, Ltd.

J. C. Lawrence

Judging by the shape of the upper edge of the cradle and the reflections on the hull, "Endeavour's" fore and aft lines are singularly easy and show promise of great speed. Her forebody is clean and her quarters light and graceful. At the left, her long mast is just being stepped. Her published dimensions are: length over all, 130 feet; l.w.l., 83 feet; beam, 22 feet; draft, 15 feet; sail area, 7,550 square feet; displacement, 143 tons

"Rainbow"

Goes Overboard

THE launching of the Class J sloop *Rainbow*, the only yacht to be built this year for the defense of the America's Cup, was successfully accomplished on May 15th at Bristol, R. I., and within three days the yacht was under sail. From the same shop at the Herreshoff plant which has launched the last six successful defenders, the new yacht, built from designs by Starling Burgess for a syndicate headed by Harold S. Vanderbilt, was sedately lowered down the ways. As the cradle in which she rested started to move, Mrs. Harold Vanderbilt broke the traditional bottle of champagne across the shapely stem, saying: "I christen thee *Rainbow*." And her skipper aptly remarked, after a look at the rain pouring down outside, "After the rain, the *Rainbow*."

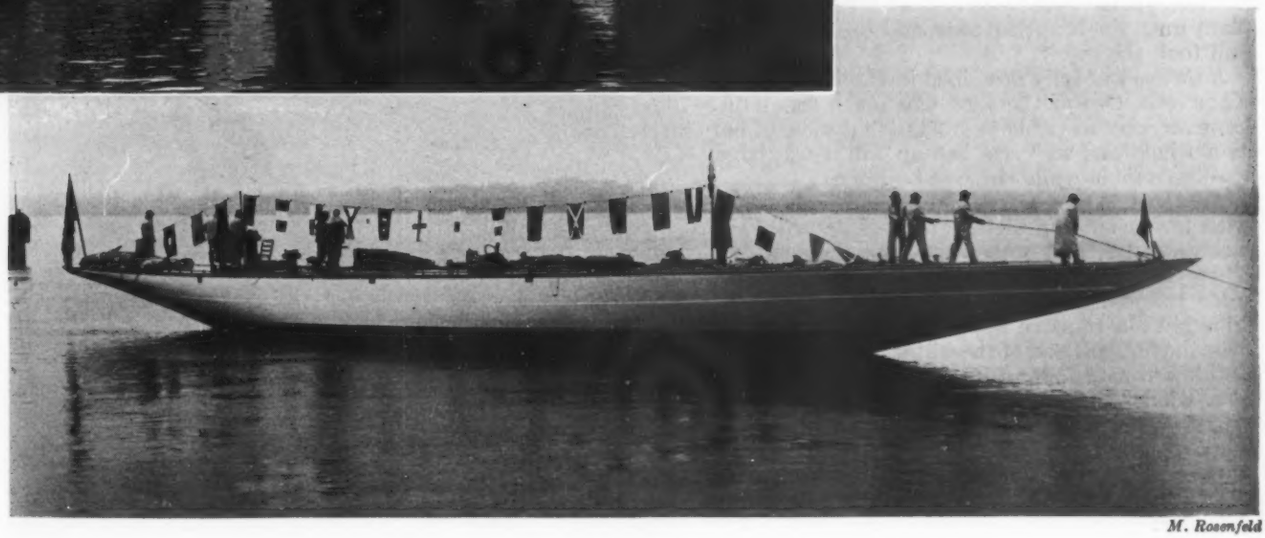
Within two hours of the time she was water-borne, the 165-foot duralumin mast, made by the Glenn L.

Stepping the 165-foot duralumin mast in "Rainbow" two hours after she was launched

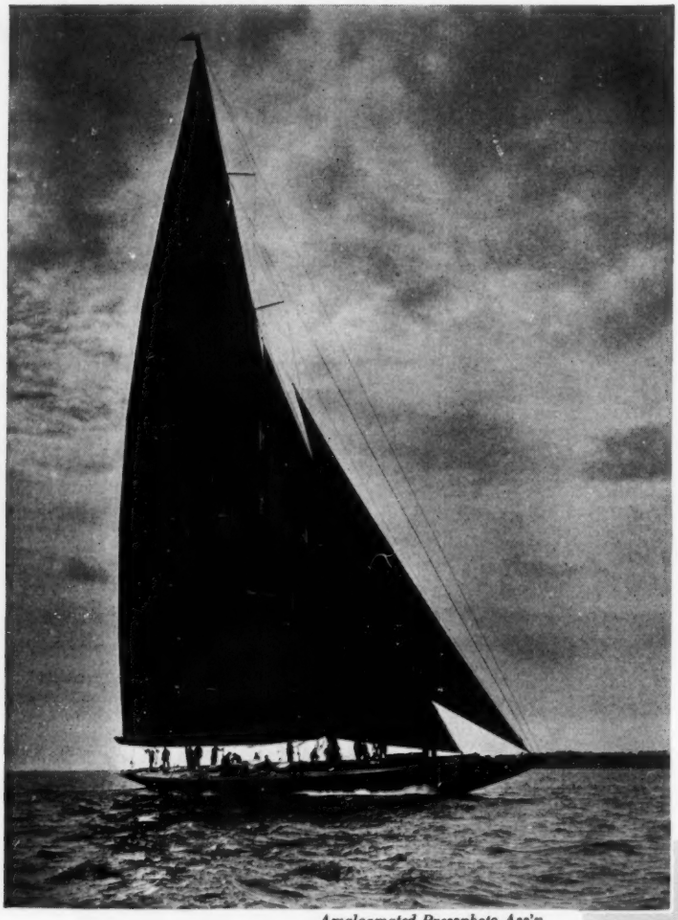
E. Levick

"Rainbow" taking the water for the first time. Built at the birthplace of six successful Cup Defenders, only 100 days elapsed from the time work was commenced until she was launched

Water-borne. Shapely, with grace in every line, "Rainbow's" looks inspire confidence in her speed. The bow overhang is somewhat longer than the after one, with a pronounced flare to the forward sections



M. Rosenfeld



Amalgamated Pressphoto Ass'n

"Endeavour" under canvas for the first time. Her early trials were most satisfactory

Martin Company, was stepped, and by knocking-off time that same afternoon the standing rigging was set up and much of the running gear rove off. All of which was in line with the speed with which the new craft was built. Less than one hundred days elapsed from the time the first steel frames for the yacht were received at the Herreshoff plant until the beautiful finished bronze and steel hull took the water.

Rainbow was fully described in the last issue of YACHTING. Out of the shed where she was built, however, one was able to get the first view of her as a whole and to "size her up" in a way that was impossible while she was building.

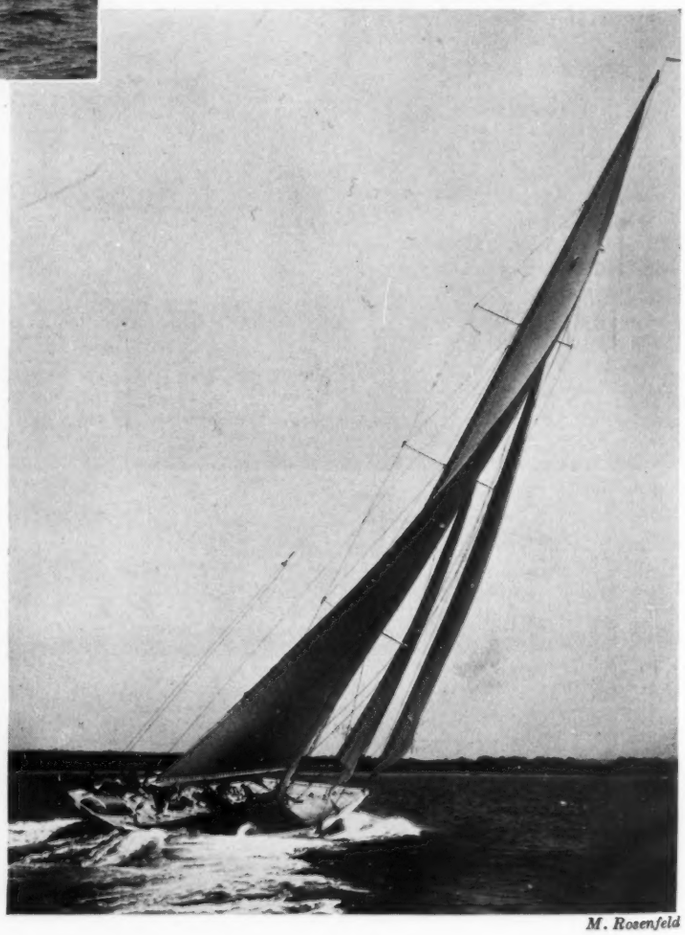
Rainbow is an exceedingly handsome vessel with an easier mid-section than *Enterprise*, the last defender, and somewhat longer overhangs. There is a pronounced flare to the topsides forward, in order to give more deck room at the bow. This gives a concave appearance to the sections near the forward end of the water line but detracts nothing from the graceful appearance of the yacht as a whole. The fore and aft lines are easy and there is no pronounced fullness to the mid-sections. She *looks* fast, and while looks do not always tell the story of a boat's speed, we believe she will be an improvement over the 1930 defender.

Perhaps the most radical feature is her shrouds. Instead of being of wire, these are made of steel rods having a high tensile strength of 215,000 pounds to the inch. There are only two of these on each side, the upper one leading over the ends of the three sets of spreaders, and the lower one from the mast at the lower spreaders. The largest of these rods is not over one inch in diameter, the upper ones being smaller, and they are joined together by turnbuckles or threaded "unions," where the tension can be adjusted. Both sets of shrouds come down to a single chain plate on each side. These rods not only save weight and windage, but should make for a stiffer mast. What will happen to the slack in the lee shrouds when the yacht heels under sail is still uncertain. The upper twenty-eight feet of the mast is entirely unsupported by either shrouds or backstays.

Below decks, the new yacht is fitted up to house her crew of twenty-five to twenty-eight men. In the center of what will be the main saloon is a well, directly under the skylight hatch, for the stowage of light sails.

The dimensions of the new yacht are as follows: l.o.a., 126.65′; l.w.l., 82′; beam, extreme 20.92′; draft (without board), 14.9′; displacement, 138.13 tons; sail area, measured, 7555 square feet.

"Rainbow" slipping out of Bristol on her first sail just three days after she was launched — something of a record in itself



M. Rosenfeld

"Ethyl-Ruth IV" John Shibe's new racer, designed by John Hacker. She is driven by a Miller "Gold Cup" motor

Speed Possibilities—And Some Probabilities

By

GEORGE F. CROUCH

WHEN the maple leaves have grown about the size of the old-fashioned silver dollar, the fever of spring affects us differently. Some men go half mad in the pursuit of a six-inch trout, others chase incessantly after the little white golf ball, some haul the sails out of the locker, go over them carefully and spend their energy scraping and varnishing spars and overhauling rigging. There are a few of us who are sure to get pipe dreams about new speed boats at this time. The weirdest and most fantastic creations come to one's mind. I know that I am not the only one affected with this particular form of springtime mania, for many letters come to me, each describing a more marvelous craft than the one preceding it.

During all the years that we have been building and racing boats, it would seem that all the possibilities had been exhausted. That, however, is far from true. Many and various are the schemes that have been tried. Millions of dollars have been wasted and the pity of it is that scarcely a single practical idea has been brought out by all the experimentation. The schemes are forgotten; nothing is heard about them for a number of years and then they break out again in another spot. Do not for a moment think that I discourage the search for newer and better forms to get higher speeds; nothing could be farther from my purpose. I hope to see some new idea applied to boats — high speed boats — which will make them as efficient as cars and airplanes.

At low speeds there is nothing which can carry freight as economically as a well-designed ship, but the moment we try to get speed on the water, the horse power required is greater than is needed for any other form of transportation. A motor car weighing 2600 pounds with an engine developing 100 horse power should make close to 90 miles an hour without any great difficulty. It is a very good boat that would do 40. And 45, or half the speed of the car, would be the ultimate limit. With the hope that it may prove of some value and interest to those who are searching and experimenting for speed, I am describing briefly some of the schemes which I have seen tried and shall suggest a few untried ideas which appear promising.

One idea which crops up again and again is that of making a boat in the form of a wheel and driving it so that it rolls through the water, the idea of the inventor being to reduce resistance. Unfortunately, the only part of the resistance which can be reduced by a roller is the friction of the water on the surface, and at high speed this is far less than the resistance due to wave making. Many roller boats have been built, some of them large and elaborate. Each and every one was an utter and miserable failure. If there were some way of making the rollers rise to the surface of the water, then we would have something similar to a motor car, but no one has as yet even suggested a method of making these wheels or rollers rise to the top. Possibly some such idea as shown in the sketch, Figure 1, might do it, the idea being to drive the wheels so that the rim speed is faster than the speed of the boat by a considerable amount, and to shape the wheels with notches so that they act as successive planes, moving backwards, however. The action of these planes would be to lift the wheel bodily in the water. For instance, if the rim of the wheel (shown enlarged in the sketch) were going around at 60 miles an hour and the boat going ahead at 30 miles an hour, each of the planes on the rim would be going aft at 30 miles an hour and would exert a definite upward lift. The horizontal component or resistance to rotation would produce the force

to drive the boat ahead. However, don't try to build this model until you have thought the idea out rather carefully.

Another scheme which blossoms with every springtime is some form of catamaran or double-hull device (Figure 2). This makes a very fast sail boat but has absolutely no value whatever for a high speed motor boat. The reason this form is efficient for sail is that the ability to carry sail can be obtained by allowing the

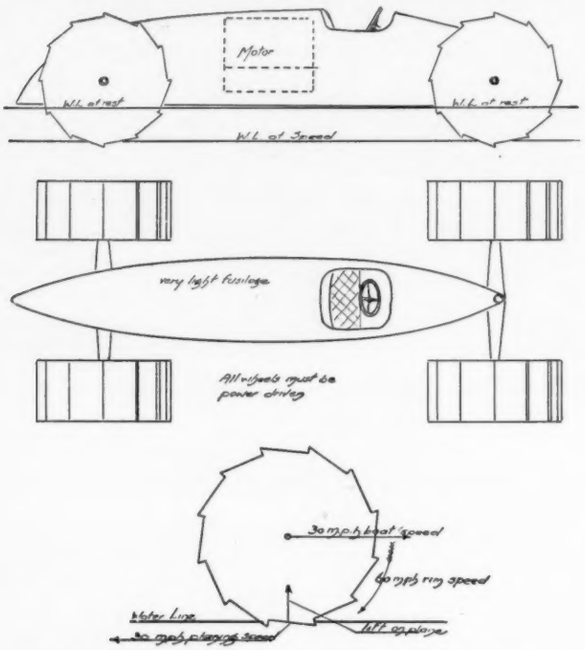


Fig. 1. An attempt to make a "wheel boat." The "slip" of the wheels causes the wheels to lift. Such wheels do lift, but they are impractical because of the terrific impact of each plane as it hits the water

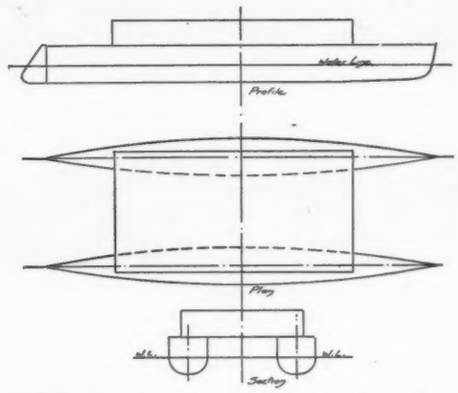


Fig. 2. Some form of catamaran is invented every spring. Two long, narrow hulls with a platform for passengers and motor between them

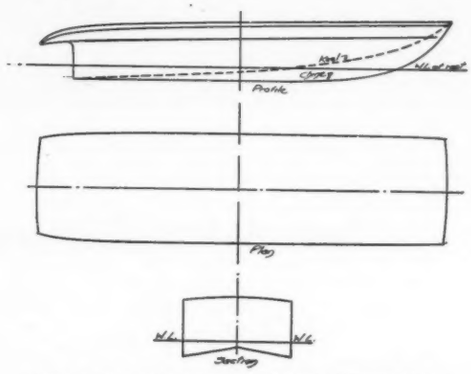


Fig. 3. Sea sled, or inverted "V" form of hull. The only unconventional hull that has successfully competed with the more normal forms. A patented hull form of which the latest models show a different shape at the chine than that drawn above

weather hull to lift practically clear of the water, and then the boat will sail on one long narrow hull. For a motor-driven boat, the ability to carry sail is not required and there is no way of heeling the boat to lift one of the hulls out of the water. A single compact hull is much better than any catamaran for any form of motor boat.

Among the many odd forms, the inverted "V" or sea sled hull (Figure 3) is perhaps the only one which has shown real value. The sea sled is, of course, a patented form and this is not the place to make comparisons other than to say that it will perform very well when sufficient power is installed. According to my belief, the inverted "V" is a true planing type. For extreme speeds, however, it does not promise those extraordinary results which we all seek.

Some years ago I developed a hydroplane a little different from the regular step hydroplane in that the planing surfaces were arranged so that each ran in undisturbed water. The sketch in Figure 4 gives a crude idea of how this was done. One reason why this idea has always intrigued me is that this model showed such extraordinary results when tested in the model basin at Washington. The faster it was towed, the less the resistance. It is the only form of hull I have ever seen which gave results of this character. It has many faults, not the least of which is the difficulty of steering; it cannot be turned quickly and it is rather hard to get planing, owing to the irregular and cut-out form of the bottom. Using a bow rudder is the only way to get this boat around a turn and, of course, the bow rudder is practically useless except when the boat is up to speed. Another objection to the bow rudder is that the average driver does not know how to handle a boat with a bow rudder. If the bow lifts over a wash, he is apt to get the rudder across the boat, with disastrous results when she drops into the water again. Another disadvantage of the three-point principle is its lack of stability when the center of gravity is too close to the single narrow forward plane. If the center of gravity is back between the two widely separated planes, transverse stability is satisfactory but longitudinal stability may not be quite so good. A possible variation of the three-point idea is suggested in Figure 5, showing the two main planes carried a little abaft amidships with small balancing planes near the bow and stern. Something along this line might show surprisingly good results.

Talk to any airplane designer and he will tell you that the only way to make a fast motor boat is to use hydrofoils — small submerged vanes — similar in shape to an airplane wing. (See Figure 6.) Owing to the fact that water is 800 times as dense as air, the pressures on these vanes or hydrofoils are very great. They must be made of very strong metal and must be accurately and carefully machined to form. There are three difficulties which seem to be common to most hydrofoil boats. One is to get stability. Riding on a submerged hydrofoil with the hull and engine lifted up into the air is like

balancing a broomstick on the end of one's nose. Various forms of V-shaped foils sticking up out of the water, or stepladder effects, have been tried and some remarkable unofficial speeds have been reported. A second difficulty with a hydrofoil boat is to keep the propeller properly immersed so that it will not cavitate. The most successful hydrofoil ever built is *HD-4*, the famous craft produced by Alexander Graham Bell, but that boat was driven by air propellers. Possibly that is the final answer to extreme speed on the water. If, however, that is the point to which we shall come, why not make it a flying boat and leave the water altogether?

Anyone who has held the rope by which an aquaplane carrying a skilful rider is towed, has wondered at the very slight pull needed to tow the aquaplane at high speed. Of course, much depends on the rider and how he balances his weight on the board. I have wondered why some designer did not try this out on a boat and mount some sort of a float on three aquaplanes, arranging it so that they would pivot and so that the pivoting point could be adjusted fore and aft. When the right adjustment was obtained, these aquaplanes would automatically change their angle to suit the speed. Naturally, a little outboard is the easiest craft on which to try it.

Somewhat along this same idea is the patented three-pontoon boat of Thomas Edison Lake, a queer craft which looks something like an ice boat running on water.

The foregoing are only a few of the many schemes proposed. I have seen all manner of ideas — on paper — which try to get a layer of air between the hull and the water. If this could be done and an unbroken sheet of air spread over the bottom of a boat, speed would be greatly increased. Unfortunately, every attempt so far shows that the "sheet of air" does not exist, but is broken up into a frothy mass of bubbles and creates a greater resistance than the unbroken water.

Some inventors have attacked the problem from the propelling end. One of the queerest which has come to my notice is based on the belief of the inventor that a fish swims by ejecting water from its gills. He mounted a powerful pump in the hull — some 30 feet long and about 4 feet wide — and drove the pump by a 100 horse power motor, squirting the water from the pump out through artificial gills near the bow of the boat. The boat made a speed of about twelve miles an hour.

The idea of using a pump and directing the water discharged from the pump aft to propel the boat, comes up again and again. It has been done with success in some English life boats, where the use of a screw propeller was inadvisable on account of the danger of the propeller fouling wreckage or the rigging of a capsized ship. It has been done in a few fire boats, but no jet-propelled boat has ever made any speed, and probably never will. The only successful unconventional method of propelling a boat at high speed is the surface propeller developed by Albert Hickman, the same man who developed the only successful unconventional hull.

Surface propellers (Figure 7) have been used for many years in canal and river towboat work. Hickman applied them and developed them for high speed. They are within a few per cent as efficient as a submerged propeller, but the absence of shafting, struts, wheel hub and other under water parts more than compensates for

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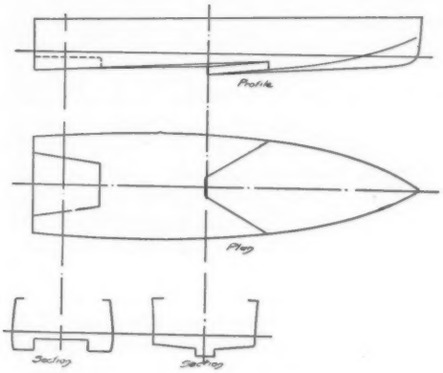
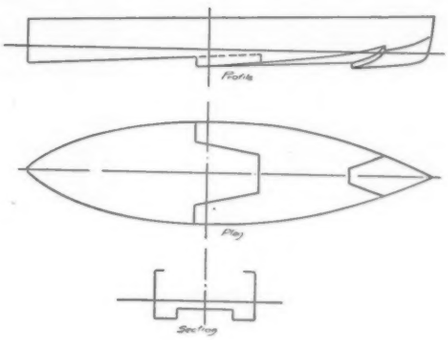


(*Extreme left*) ***Fig. 4. Three-point hydroplane. Fast, but hard to get planing and hard to steer. Poor on sharp turns. Weight must be far aft to make this type stable***



(*Left*) ***Fig. 5. Modified three-point hydroplane with small balancing planes at bow and stern. This appears to promise good results both in speed and in turning***

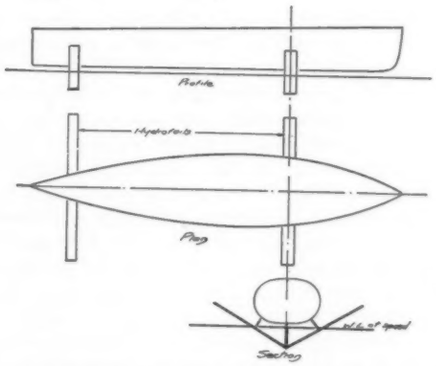


Fig. 6. One form of hydrofoil boat. Often small hydrofoils are arranged one above the other like the steps in a ladder instead of a pair of large hydrofoils as shown. Probably the most promising of all forms for extreme speed, but patents cover every practical application

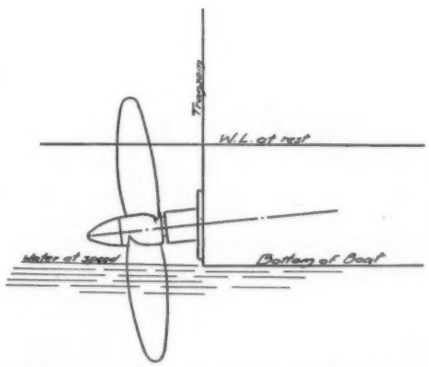


Fig. 7. At full speed only the lower half of a surface propeller enters the water, which flows out in a sheet from the bottom of the transom. No hub, shaft or struts in the water to cause resistance. As in the case of the hydrofoils, the surface propeller and its application is thoroughly covered by patents

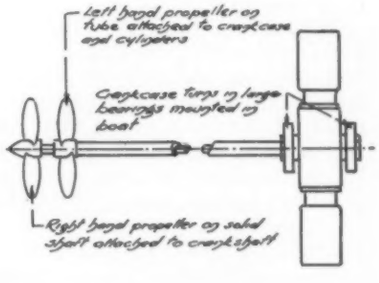

Left hand propeller on tube attached to crankcase and cylinders
Crankcase runs in large bearings mounted in boat
Right hand propeller on solid shaft attached to crankshaft

Fig. 8. Diagram showing balancing of torque using tandem propellers and radial rotating motor. The system of using two propellers, revolving in opposite directions, has long been applied to the propulsion of torpedoes and has recently been used in outboards

Reaching at high speed. The leading crew is hiking hard to keep the boat on her sailing lines. In the second boat, with slightly started sheet and bow buried, hiking is momentarily of less importance

Learning to Sail In Small Boats

The Novice Should Begin With a Light, Unballasted Centerboarder

By

JOHN S. BARNES

WE WERE on the committee boat during the recent International Dinghy Race on Long Island Sound. Two teams were scrapping it out well up towards the weather mark when one of the small keel boats, so popular on the Sound as a class for Juniors, passed us close aboard. She was a pretty thing to look at as she sailed by, stepping out to windward with an easy canter-like gait.

"Splendid little boat," I couldn't help remarking.

"Yes, but no boat to learn to sail in. They won't capsize. Can't learn sailing that way any more than you can learn to hunt on a horse that won't jump," came the reply.

The expression struck me with surprise. I have always been a supporter of the light centerboarder or unballasted boat for beginners. If you know your boat can capsize, you're alert and will handle her more keenly. If she does capsize, no harm is done. There being no ballast to sink her, she'll float forever and all you need do is hang on. But Sound sailors for many years past seem to have put their youngsters afloat in small, open keel boats. Only since the advent of frostbiting have they apparently admitted the true value of the little centerboarder.

Experience, judgment and skill still win races and nothing can ever take their place, but theoretical and technical knowledge, when combined with those qualities, is playing an increasingly important part in yacht racing. I came away with the firm idea that, because of this growing importance of theoretical knowledge, there is a real demand for a discussion of the more elementary technical and theoretical points in simple, non-technical language.

Let us start with the balance of our boat. By this is not meant trimming ship or placing the weight so that the boat floats on an even keel, but the balance between the forces in sails and hull, so that she sails a straight course without undue use of the rudder.

If a boat has a tendency to turn one way or the other, she is said to carry a helm. If the tendency is for her to turn her bow into the wind, she has a weather helm; if she swings her head to leeward, she has a lee helm. Most well designed boats carry a weather helm. In moderate amount this is desirable, but an excessive weather helm in fresh breezes is something nearly every small boat sailor must fight. The rudder, when held at an angle, not only turns the boat but exerts a drag. So, if the rudder must be held hard over to keep her on her course, it is also acting as a brake. In such case the boat is not balanced.

The most important factor in controlling balance is the relation between the center of lateral resistance (*CLR*) and center of effort (*CE*). We all know that it is harder to push a boat sidewise through the water than forward. The resistance met in pushing her sidewise (laterally) is the lateral resistance. Hulls are given keels or centerboards to increase this. The underwater portion causes the lateral resistance and is called the lateral plane. The center of lateral resistance is, naturally, the center of this area, and is the point at which all of the resistance can be considered as being exerted. If you cut out a piece of cardboard exactly the shape of the shaded area of Figure 1 and balance it on a pin point, the spot on which it balances would be the center of lateral resistance. By pushing sidewise on the *CLR*, the boat will move to the side without swinging one way or the other. However, if we push abaft this point, the stern will swing away; if we push forward of the *CLR*, the bow will swing away. In other words, the *CLR* is the point on which the boat would pivot. We may liken the boat to the weather vane in Figure 2. The pin on which the vane pivots prevents it from moving sidewise. As this pin is attached at only one point, the *CLR* must be at that point. If we push on the vane between the pin and the tail, the tail swings away; if we push between the pin and the head, the head swings away. If we push at the very forward tip it is much easier to swing the head than if we apply the pressure at *A*, nearer the pin. The farther from the pivot, or *CLR*, the pressure is applied, the greater the leverage and the more easily the body is swung. This is obvious in the case of the weather vane and we can consider our boat as pivoting on her center of lateral resistance in the same manner.

We have dealt with the *CLR* as though its position could be exactly determined. In practice, however, it is impossible to locate it accurately, due to the varying resistance offered by the curved surfaces of the hull. The lateral plane is also constantly changing its shape and angularity as the boat heels. The true center of effort is actually forward of the *CE* described here due to the greater efficiency of the forward portion of the sail, and its position is affected by various factors such as trim of sails, etc.

Let us now consider the center of effort (*CE*). By effort is meant, in this case, the effort or pressure which the wind exerts against the sails. In other words, the power that makes the boat move. In Figure 3 the center of effort is the center of the shaded area and, like the *CLR*, it may be found by balancing a piece of cardboard, cut to the shape of the sail, on a pin. Like the *CLR*, too, the *CE* is the point at which the entire effort of the wind may be considered as being exerted. Then, if the pressure of the wind is exerted at the *CE* and the resistance to side motion is exerted at the *CLR*, the relation of these two centers affects the balance. If the *CE* is between the *CLR* and the stern, the stern will swing away from the pressure. If the pressure is caused by the wind, the stern will swing away from the wind, the bow will swing into it, and the boat has a weather helm. In like manner, if the *CE* is forward of the *CLR*, the bow swings away from the wind and she has a lee helm.

To return to the weather vane. The wind blows against the whole surface, and this we may compare to the sail area. If we make a cut out of cardboard in the shape of the arrow, it would obviously balance on a point between the *CLR* and the tail. This balancing point, or *CE*, being between the pivoting point and the tail, the tail is blown away from the wind, pointing the arrow into the wind. The weather vane is like a boat with a weather helm.

If it were all as simple as this, by placing the *CE* directly over the *CLR*, the designer could produce a beautifully balanced boat. But, as we all know, even the best boats may carry a heavy weather helm under certain circumstances. This is due to the fact that other factors affect balance, and that wind pressure and resistance vary with the velocity of the wind, the speed of the boat, the angle of heel, trim of sails, etc.

In designing, the *CE* is placed forward of the *CLR*, to oppose forces which tend to drive the bow into the wind. The further the *CE* is placed forward of the *CLR*, the greater will be its leverage about the *CLR* and the less will be the tendency of the boat to head into the wind.

It then becomes apparent that if we can change the relationship of these two points — that is, move one or the other while sailing — we can change the balance of the boat. It is sometimes found necessary to move the mast and, consequently, the sails, forward or aft to get balance, but this cannot, as a rule, be done while the boat is sailing. We can, however, move the center of lateral resistance somewhat by various methods. One of these is by shifting the weight in the boat. Figure 4 shows the boat floating down by the stern. The weight has been moved aft so that more of the stern and less of the bow is submerged than in Figure 1. We can see that the new lateral plane would not balance at the same point as that in Figure 1. The pin point would have to be moved farther aft and we would find the *CLR* to be about as indicated. The *CE* has not been moved by this

Figure 8. The dinghy in the foreground shows the bow wave all on the lee bow, even at this slight angle of heel. The crew will soon bring her upright by hiking out and the bow wave will be balanced

Right, Figure 9. The leading dinghy is being hiked harder. She is standing up straighter, pointing higher, and traveling faster

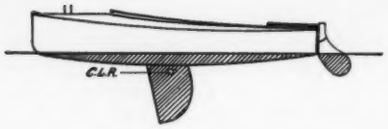


Figure 1

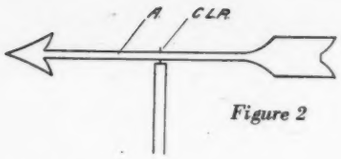


Figure 2

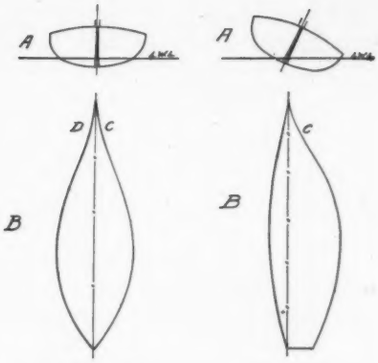


Figure 6 Figure 7

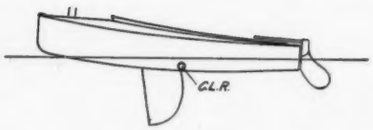


Figure 4

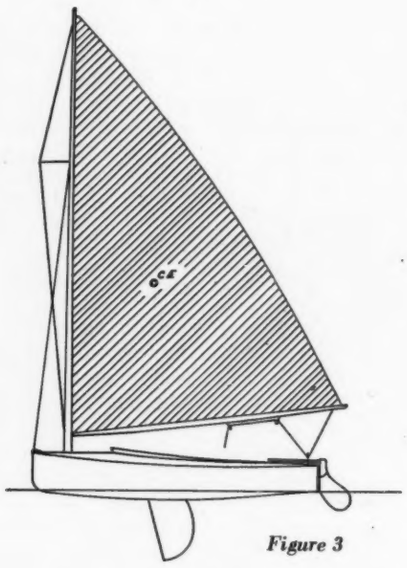


Figure 3

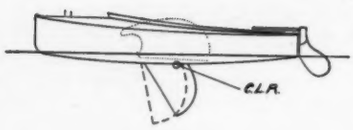


Figure 5

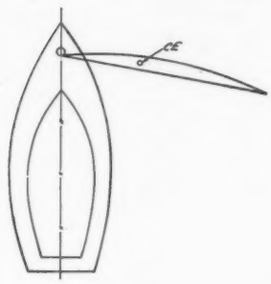


Figure 10

shift in weight, so it is now much farther forward in relation to the *CLR* than previously, and has greater leverage. The boat will have less tendency to drive her bow up into the wind. The change shown, however, is exaggerated and it would be impractical to alter the trim of the boat to this extent.

While helping the helm, such a great shift would be detrimental to the boat's speed. When shifting weight, we must be mindful that we are changing the lines on which the boat is sailing; the change may produce a drag that would slow up the boat more than the excess helm that we are trying to relieve. This would undoubtedly be the effect if any such extreme change as that illustrated in Figure 4 were tried. In the first place, the boat was designed to have her bow in the water. Then, too, the flat stern was never intended to be dragged through the water. In the position shown it would draw up a great stern wave and cause as much drag on the boat as if the rudder were held constantly at right angles. All changes, such as shifting of weight, must be accompanied by careful observation lest a new difficulty develop as the old one is overcome.

There is another means of shifting the *CLR* in a boat with a swinging centerboard. Figure 5 shows the hull with the board in three positions — all the way up; all the way down; and slightly raised from the down position. Usually, the all the way down position is best for sailing on the wind. In light airs, under these conditions, we are not bothered by too much weather helm; but if the breeze is fresh, and particularly if sailing with a slightly started sheet, the boat is traveling fast, we feel the tug of the tiller and the boat feels the drag of the rudder. The helm will then be relieved if the centerboard be raised part way.

You can see from Figure 5 that by doing so the *CLR* is moved aft. As we start to raise a board of this type, it swings aft more than it swings up, so that its area is only slightly reduced, while the *CLR* is moved considerably. Under the conditions outlined, we can afford to reduce the area of the board, for the boat is moving fast. As the speed increases, so does the efficiency of the lateral plane, so that a smaller area will keep the boat from making leeway. Reducing the area also reduces the wetted surface of the board and, consequently, its skin friction.

By careful experiment we may find it possible to raise the board slightly even when sailing to windward; but again we must sound a warning. Go very cautiously and be sure the boat is not making leeway. A little leeway is most detrimental and is hard to detect. It is often helpful to put marks on the top of the board which may be used to get it in the desired position.

So much for the *CE*, *CLR*, and their effect on balance. There is, however, another force that affects, to some extent, the balance and helm of every boat. This is brought into play by the bow wave and is particularly noticeable in light centerboarders. Under certain conditions it may outweigh the other factors that influence balance. To understand it fully we must visualize the shape of that part of the hull on which the boat rests when sailing at an angle of heel. Figure 6 shows, at *A*, a bow view of the boat floating upright on her natural water line. If we saw the boat in two along this water line, we would have in the bottom section all of the boat that is in the water. When viewed from above, it would take the shape shown at *B*, Figure 6. With the boat upright, the portion in the water is the same on both sides. As she moves forward, a bow wave is formed at *C* and *D* which is equal on both bows. This is not the case when the boat is sailing at an angle of heel, as in Figure 7. *A* is the bow view at a normal sailing angle and we see that she has found a new water line.

If we cut the boat in two along this new water line, the lower section would look like *B*, in Figure 7. Now, instead of a bow wave being formed equally on both sides, it is almost entirely on the lee side, at *C*. All the force of the wave is exerted on the lee bow, tending to

(*Continued on page 106*)

"Starfire," A Husky All-Weather Cruiser

Built for Sumner E. Gifford, of New Bedford, Mass., from designs by William H. Hand, Jr., "Starfire" is 55 feet over all, 14 feet beam, and 4 feet 4 inches draft. Construction is of the best, the boat being fastened throughout with Everdur, while almost every piece of metal work used was designed and made expressly for her of Everdur bronze. A Sterling Petrel of 180 horsepower, driving through a 3:1 reduction gear, gives her a comfortable cruising speed of ten knots, which is well below her maximum. She has a husky, seagoing appearance, and comfortable quarters. To the left is shown the pilot house, while below are the galley and the main cabin

Photos by M. Rosenfeld

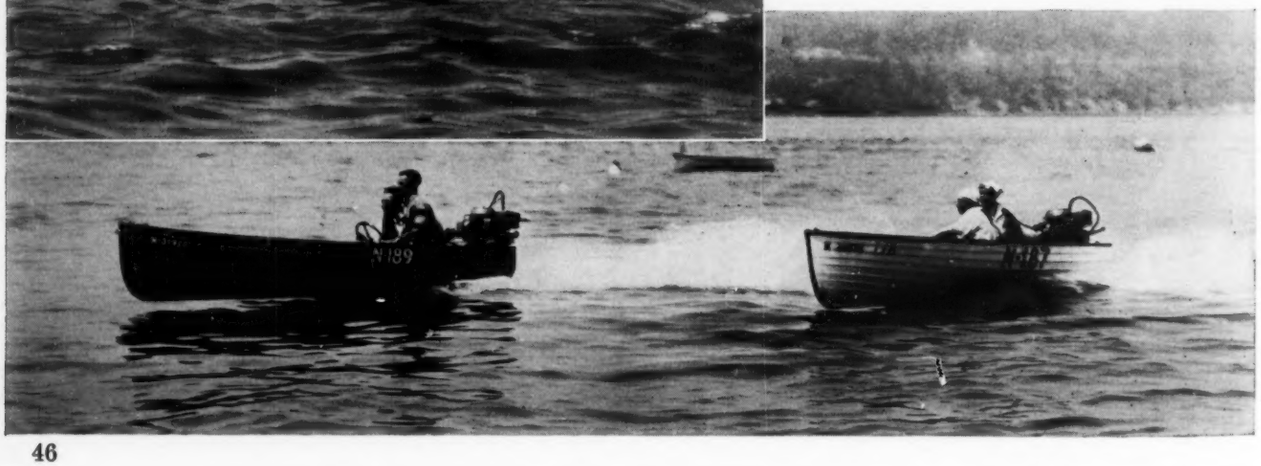
Charles H. Johnson took his first shot at the Albany marathon and gathered in five prizes in addition to the Haynes-Griffin Trophy for the first boat to finish. He cut more than fifteen minutes off the Class C record and was within three minutes of the course record set in 1932 by Charles Cabot

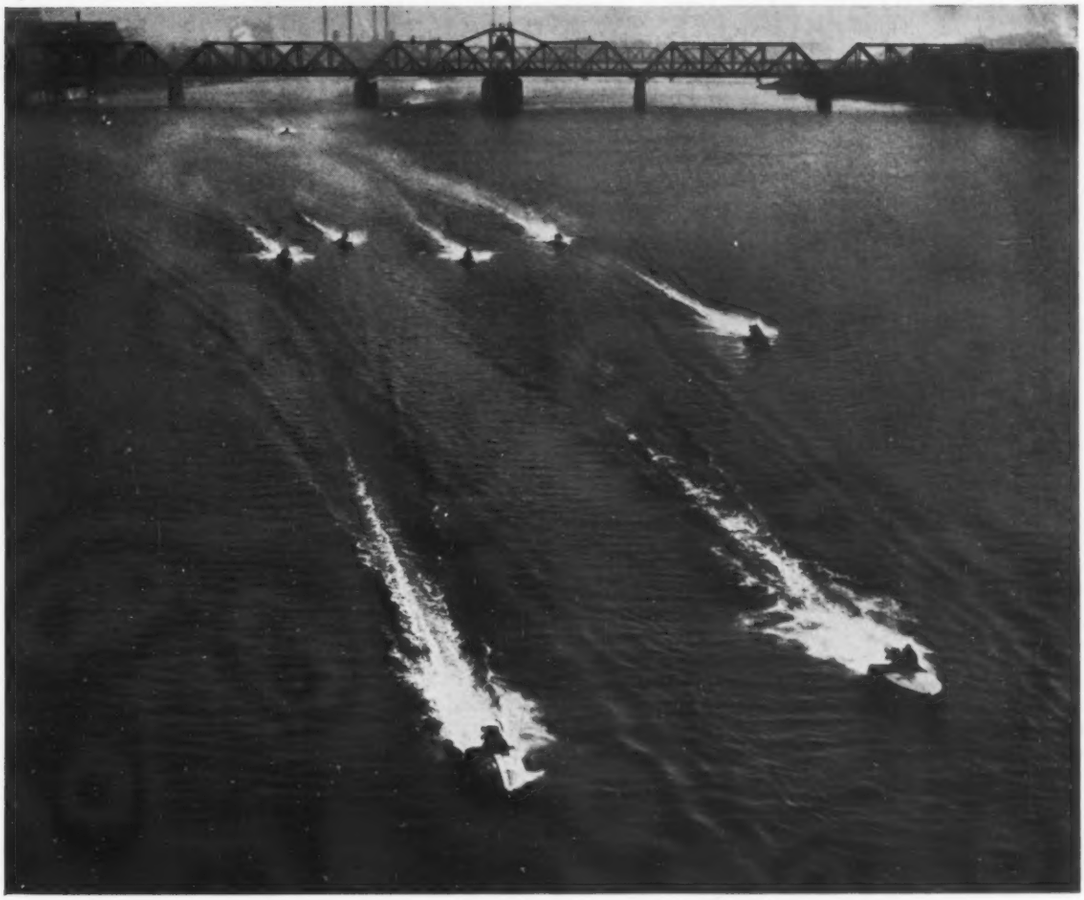
Photos by M. Rosenfeld

Clayton Bishop also did a neat piece of record smashing in Class B, covering the course in nearly thirteen minutes less than the former figures. He finished third in the race and first in his class, averaging 36.5 m.p.h.

Ted Roberts, in N-10, sliced twenty-one minutes off the Class A figures and captured three prizes, among them the George H. Townsend Trophy for the second boat to finish

Two of the Class E runabouts — and the only two which crossed the finish line — stage a stunt for the camera men. Actually, they were nearly six minutes apart as they crossed the line





Class C, full of pep, starts the long grind down the Hudson

The Hudson Takes Its Toll

Only Eighteen Boats Finish in the Seventh Annual Outboard Race

WE ARE accustomed to think of river navigation as being easy and peaceful, with no heavy seas to bother the yachtsman and little to worry about except adverse current. But in the seventh annual Albany-New York Marathon, held on May 13th, the Hudson took a heavy toll of the outboard boats which attempted the 132-mile grind at top speed. Some gave out or capsized near the starting line, one engine died finally at Dyckman Street, less than three miles from the finish. At the start, the weather was calm and the water smooth but, as the day wore on, the wind sprang up and whipped the waters of Haverstraw Bay into a chop that bothered the little racers considerably. Between Tivoli and Saugerties, and in the Highlands near West Point, there was also a nasty chop. In general, however, the river was smooth and the winners ran ahead of their handicap times. For the second time, the boats were started at intervals, each class separately, the handicaps between the classes being figured so that, theoretically, all classes would reach the finish line at the same time.

Sixty-six starters got away from the Albany Yacht Club at intervals from 7:00 A.M., when Class A was sent away, to 8:15, when the Class E runabouts were given their gun. Eighteen of the fleet reached the finish line off the Colonial Yacht Club at 152nd Street, New York; the rest were scattered along the course, suffering from the various ailments which affect the racing motor when driven beyond the limit of endurance, or hung up on sand bars and mud flats while taking short cuts across shoal water. Only two of last year's veterans came through, Fred Jacoby, who finished sixth, and Ken Mackenzie who took fourteenth place. Both had done well in previous years.

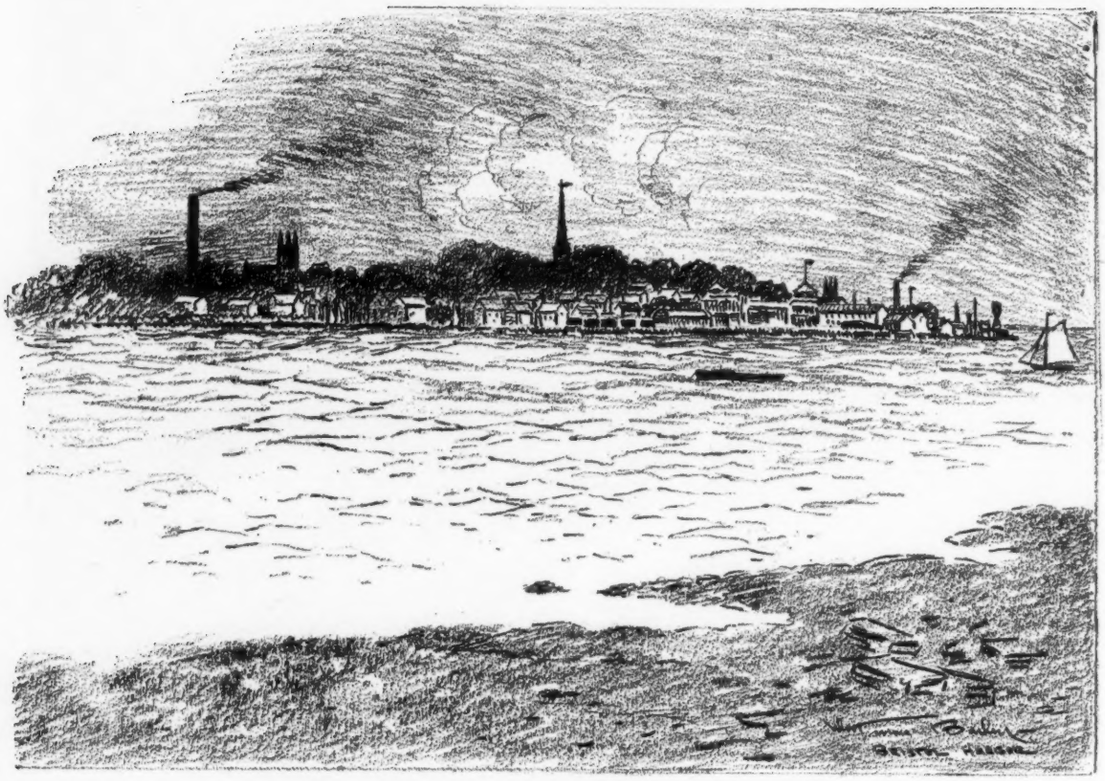
Records went to smash in Classes A, B and C, though the course record of 2:56:39, 44.4 m.p.h., made by Charles Cabot in 1932 with an F motor, is still good.

The winner, Charles H. Johnson of Cranberry Lake, N. J., came romping in at 10:38:53, cutting nearly sixteen minutes off the Class C record and setting a 44.2-mile pace for the race. Next, at 10:45:12, was Ted Roberts of New York, knocking 21 minutes from the Class A figures. Third place went to Clayton Bishop, of Onset, Mass., who arrived at 10:51:05, nearly 13 minutes ahead of the Class B record, with a boat that swamped almost as soon as she made fast to the float. The rest came straggling in at intervals until 2:19, when the

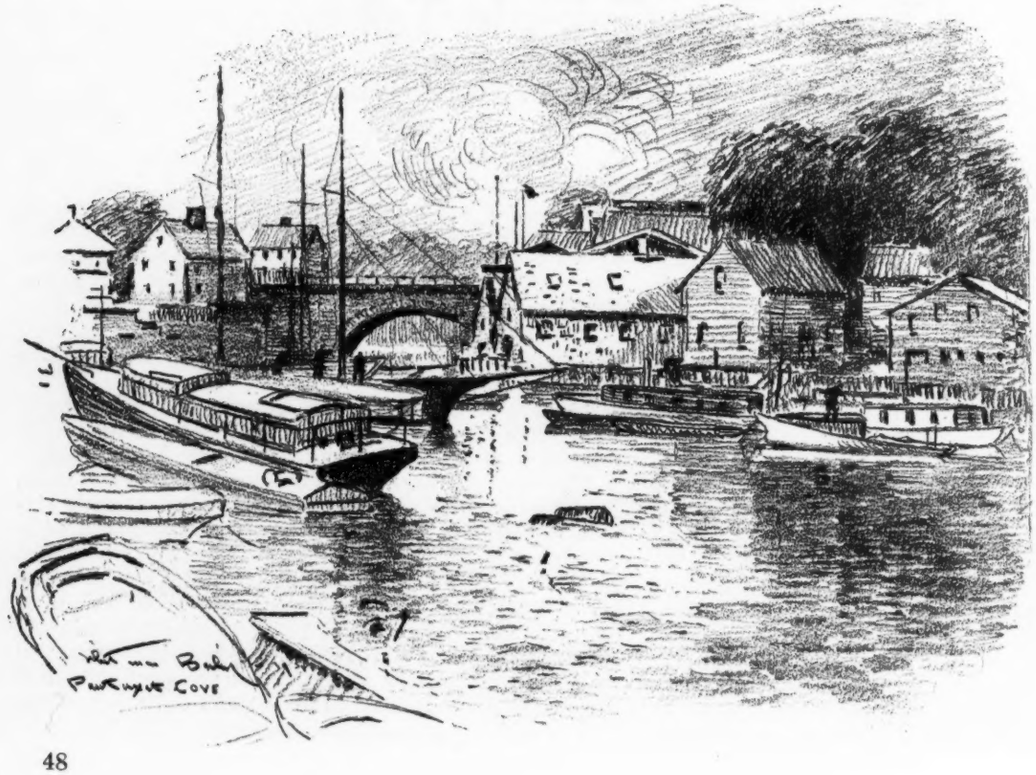
(Continued on page 114)

Narragansett Bay Harbors

Drawings by Whitman Bailey



The harbor at Bristol, for forty years the birthplace of America's Cup defenders. The Herreshoff yard may be seen near the point on the right



Pawtuxet Cove, on the westerly shore of the bay. Though it gives a hint of some Cape Cod fishing village, with its low, weather-beaten sheds, Pawtuxet has a character all its own

Cruel and Abrasive Treatment

By

CAPTAIN ABILDGAARD

ONE should, naturally, begin at the beginning, and so let me harken back, for the moment, to the words of Huxley who, some eighty years ago, ventured that, "Science is nothing but trained and organized common sense, differing from the latter only as a veteran may differ from a raw recruit." For it is in this dictum that we find the *leitmotiv*, as one might say, of Dr. Hjalmar Hjurrig and the Q.E.D. of his now famous Suicide Boat *Der Gotterdämmerung*.

Dr. Hjurrig, whose name befitted him far better than the clothes that fluttered around him — coat tails flying — as he pursued his ever quickened thoughts, was and still is, a mathematician of world renown. And when he was not frantically writing out five-fathom formulae and then reducing them through labyrinthian byways understood only by his equally massive-browed colleagues to a scant handful of cabalistic signs and quirks resembling skewed loops and apple parings that seemed of no earthly use in solving our more vital problems, he would give over his calmer hours to the sailing of small boats.

At first it was a mere hobby, sedately indulged on the toy lakes of his native Germany, until an exchange professorship brought him to our more competitive shores and final retirement found him among the choicer souls of Coconut Grove where, hard upon the sparkling waters of Biscayne Bay, his former pastime now engaged the greater portion of his *dolce far niente* existence. From wriggling a protesting piece of chalk across the Stygian void of a blackboard, his facile hand now grasped the tiller of his tidy Wannsee racer as he inscribed no end of rhomboids and re-entrant angles upon the cerulean surface of the limpid bay. From being monarch of the classroom, he became, in a lesser degree to be sure, monarch of the marine pastures which lay just beyond his doorstep, for in those days there were no small craft in that locale which could match the speed of his swift little 20-square-metre. Here was contentment in the novelty of skimming over the ever fascinating marble-white floor of his newly found playground where the diversion of dodging coral heads or crossing courses with an occasional shark also held the fillip of coming upon some forgotten portion of a rum-runner's "drop" which he invariably fished up for the delectation of his harder drinking friends. That is —

Until a strange saucy-looking craft, all length and but little beam, skippered by an even stranger and more saucy-looking youth — all wide-bottom pants and surmounted with little if *any* apparent bean — literally shot out from the neighboring shore and proceeded to cut no end of circles, involutes and evolutes together with an assortment of impish didoes having no ancestral formulae whatsoever, around the ruffled professor and his hitherto peerless importation. Youth gloated while age fumed through its sacrosanct whiskers, and gracefully made the best of it. Then age became warily discreet and politely inquired into the origins of this weird example of naval architecture. *So-o*, she was one of dose self-killing boats of der new Suicide Classe one was reading about in die yachting journalen. One was granted so much sail area und der rest *geht los*. It further appeared that this particular craft — impertinently named *Toodle-oo* — had been conceived and even built by her scatter-brained owner.

If such a slick-haired noodle, still in his tender teens, could be father to such a speedy craft, why should not the good doctor, fortified with the mathematical weight of Göttingen and Heidelberg, not to mention Palermo, Paris and Harvard, to spur his brain, combined with his more corporeal bulk to act as ballast where lack of beam might be felt in strong airs, sire and sail, in the full powers of his Teutonic manhood, a *Selbstmörderisch Schnellsegler* that, parabolically speaking, would commit hari-kari with the aspirations of such a young *spitzbube* as dared show his unspanked stern to the professor. By his Ph.D., LL.D., and all the honorary degrees that trailed his name like a homeward-bound pennant from the China station, he would go the fellow one better! A round *dozen* better; namely one for each degree! *Sakrament, Donnerwetter und allgemein Verdammung!*

Now from long habit, as is the case with motormen, marathon dancers and district attorneys, Dr. Hjurrig was at his best when on his feet, and all that was further needed to keep the wheels spinning under his polished dome were the requisite chalk and a blackboard before which he could perambulate while blowing the froth from off his seething thoughts. So he removed his car to the seclusion of the summer-house and painted the inner back wall of his garage with asphaltum. Before this he placed his battered flat-topped desk and having further simulated the academic atmosphere, in which he was wont to thrive, by arranging banks of lawn benches supporting an array of empty beer kegs, a sail bag or two and some cushions, all topped off with coconuts, so that now he had an audience that was neither more responsive nor intelligent, for that matter, than most of his quondam students — though less restive — he donned his frock coat over his pajamas and went to work.

Discoursing aloud to his coconutted seminar, he first propounded that x, the weight of the boat, plus his own weight, circa 99.8 kilograms, let us say 100, would equal y which must be pushed through the water. No! It must be slid over the water like that *verfluchte Toodle-oo*. But if it slid, would it not be dragging some of the water with it? The old cerebrum was warming up a bit over this academic query. Had he not observed, when returning from the last convention of the *Deutsche Mathematiker-Vereinigung*, that the water contiguous to the ship's plating seemed to roll by in small eddy formations? His supercharged brain cells now were zooming on all sixteen! Then the bottom of the boat must be corrugated — *transversely* — to encourage this rolling friction. But how? That stumped him for the moment and he paused to wipe away a reminiscent tear which had welled at the thought of his own welted bottom when, as a boy in Hamburg, he had been punished for falling into the Alster. Ja, it was his skin that was corrugated in varying degrees and had almost come off in places. Well then, why not have a removable skin for the boat — several of them, fluted in varying degrees to suit the wind and her speed? Defying the blank stares of his students, the doctor removed his coat and continued his

labors unabashed in his pajamas, for it was hot and his brain was seething with fool ideas. Er, "trained and organized common sense" which this "veteran" was applying scientifically.

Having expounded this *reductio ad absurdum*, and there was none of his seminar to gainsay him, the doctor now projected himself into the third dimensional realm. That is, he was no longer a mere lump of flesh which together with the weight of his boat produced an item of displacement that would glide upon Neptune's roller bearings, but he became a dynamic entity — a rôle that suited him far better — which, multiplied by the approximate distance between his gastronomic center and the center of buoyancy of his *Selbstmörderisch Schnellsegler*, both centers being variables, must maintain a balance with a third variable, namely the wind pressure lurking somewhere in the belly of the sail plan.

Here was something in the way of mental and physical jugglery, and fired with the hot gas of enthusiasm, old Hjurrig paced back and forth, his slippers slapping on the cement floor of the classroom, while his listeners looked on, literally dumbfounded!

"Der vind," he blew it through his whiskers, "that altso was a veränderlich quantität." It came and it went even when it was supposed to be steady, and when it was *pustig* the pressure graphs of the squalls resembled the variations of the stock market during a week of gold buying. And, as the wind could no more be tempered to the unshorn professor than the stock market to the shorn investor, its effect must be cushioned, not through selling short on sail area as one might phrase it, but through an accommodating elasticity on the credit side. The mast must bend to the blasts — hardly a new thought — and so there would be no shrouds. But there is a limit to the *gemütlichkeit* of silver spruce, and why make the mast do all the work, anyway? *Sapristi!* the sails must do *their* share. There should be elastic webbing between the cloths so that when der vind huffed and puffed like der jolly old wolf, the sails would stretch and bulge and give more draft — which was just what you wanted when it blew harder — and then as the squalls eased the webbing would snap back again, shooting the boat ahead like a prune stone. Ach, that was an idea! Yet the bitter here trickled in with the sweet as the doctor visualized this new conception, and he must draw his sleeve across his eyes from recalling the undulations of his late lamented wife when she used to do her bending exercises in her ribbed union suit. For she had a figure that was permanently blown out, squall or no squall. And a lapse of exercise plus an overindulgence in pig's knuckles times a quantum of sourkraut had more than equalled her undoing. That is, the pig's knuckles brought on an attack of acute indigestion while the more nitrogenous kraut effectively had expanded the good frau to kingdom come. Overwhelmed by emotion, Dr. Hjurrig hurried from the classroom, leaving his uncomprehending seminar to stare blankly at the diagrams upon the blackened wall.

He sought the coral beach where the soothing Trade played riggishly with his beard, like the fingers of Naiads, and then whisked impishly through the vent holes in his sun helmet, strumming gentle minor tones. One saw him a pathetic figure (except where past indulgence in Münchenerbrau outlined itself against his windblown pajamas) standing seemingly alone where sea met shore, and the little crabs eyed him for the big soft-hearted man he was, from their holes in the sand. But unseen perhaps and most certainly unrecognized by the little crabs, uxorious nature, she who is wedded to science, stood there at the professor's elbow. Following him from the classroom, as though he were a little child to be looked after, she mused, "Those little tones, Herr Doktor, that the wind is blowing through your helmet — ."

"*Ja, wohl,*" he sniffed, "dem we shall make use of, altso."

And so was born, not that minute exactly but as soon as the professor could have sent him a number of especially designed pitch pipes from Philadelphia, the Hjurrig "*Selbstzuhörenwindkrafteinrichtunggefinder*" which, after being dismembered and put end to end again in English, would read something like "Self-audible-wind-strength-direction-ge-finder," and you could croon it to the first bars of *die Lorelei*. That is, these delicately tuned pitch pipes, mere metallic quills, were ingeniously set in the interstices between the sweat-band and the helmet proper and were arranged in descending scales, port and starboard, beginning with high *C* at the forward end, each note indicating the difference of a quarter point from its fellow. Thus, the doctor need but orient his calliopedical compass, if you still follow me, to the course he was sailing and the dominant note gave him the wind direction without his having to squint at the telltale, or peer into the luffs of his stretchy sails. In other words, he could watch an opponent or lay up for a buoy regardless of his craft, knowing that she was doing her harmonic best so long as he conned her on *D* sharp or *G* flat, as the case might be, or even poised on a double note. Any variation in the strength of the wind was instantly recorded by the intensity of these chromatic murmurings to which the professor further attuned his ears by keeping them scrupulously de-waxed and free from unnecessary hirsute growths. For he was thorough in all things.

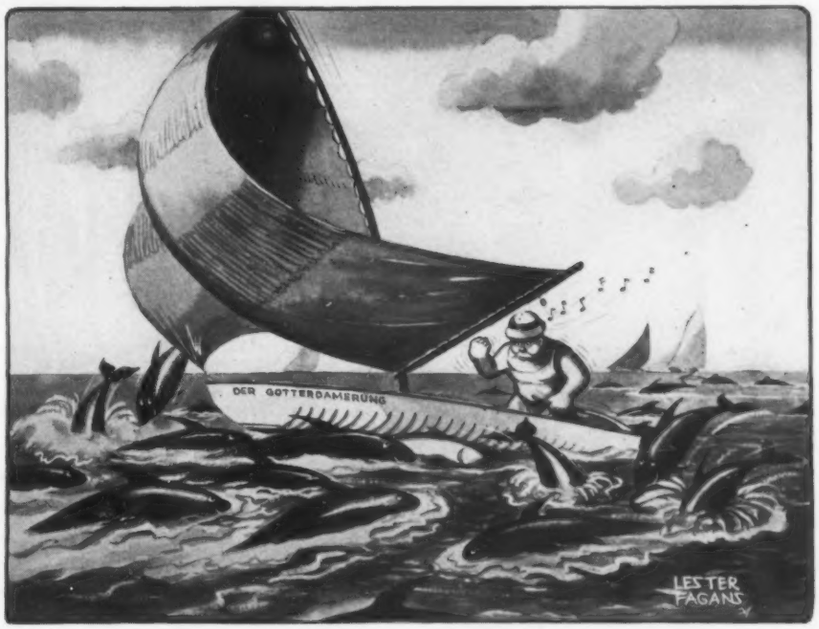
Having served their vacuous purpose, the dummy students were peremptorily dismembered into their component parts and now the garage became a sort of laboratory-workshop whence in due course emerged the canoe-like form of *Der Gotterdämmerung*, or the *Got-'er-diapers-on*, as one old native dubbed her because of her muslin step-ins, while another, more salty, was not sure whether that frilly bottom was more like the ginger-roll on the underlip of a baby whale or just something to scratch matches on. At any rate, there she was, corseted for better or worse, as you might say, with her snugly fitting tegument ingeniously laced to a monkey rail placed where it would keep her skipper's own precious bottom from sliding to looard when he sat to weather. And when first her tallish rig was stepped, with its wide-seamed sails whose bellies swelled seductively to the puffs, that same old salt swore that, between wind and water, no slinky hula-hula dancer had anything on *this* craft!

In the meantime, a veritable fleet of Suicides had sprung up to vie with each other on the sheltered bay.

And more were building. You got a skew-eyed hunch during the jazzy hours of Saturday night, the fever took advantage of your convalescent condition on Sunday and you began to slap together some half-inch boards on Monday, so that come the following Saturday noon you were ready to race with the rest of the fleet for a bottle of Old Tom (née Belgian alcohol, weaned on water by the rum-runners, and baptized with juniper essence by the commodore's bootlegger). Every Tom, Dick and Jane seemed to have fallen for the rage, from winter visitors out of the corn belt to ex-Diesel owning realtors who *had* to stay in Miami all the year around, while the names of their craft ranged from *Two-gallon Sarah* to just plain *Ivy*, presumably of the poison variety.

Needless to say, there had been growing rumors

among the Suicides concerning the strange creation — if any creation could be stranger in degree than the weird contraptions which now were skittering where only the dainty 20-metre and the saucy *Toodle-oo* had held sway — that the doctor was furtively tuning up under the stars. And so, when our hero at last ventured forth on the fateful Saturday afternoon toward which we have



"Gottverfluchte Meerschwein!" swore the irate doctor, "diss is no ring-around-der-rose-bush!"

been heading, the entire fleet, veering like a school of minnows in a common evolution, swooped down upon *Der Gotterdämmerung* with welcoming whoops that all but startled the good man out of his luncheon of *leberwurst und lager* (½ of 1%).

"Hey, doc," screamed he of the *Toodle-oo*, familiarly, "c'm on 'n' race! Y' c'n join up, later." Whereupon, as though the matter were a foregone conclusion, the young savages turned back for the starting line again, the doctor following after on two tones lower than he could have sailed. Pulling his nag, as it were.

"Bang!" went the preparatory gun and with what some mistook for a Nazi salute, but it wasn't, the doctor pressed a button which started a tiny music box (pst! and I almost forgot *that* one) which played, "Oh Where, Oh Where Has My Little Dog Gone?" just under the crown of his hat, for exactly five minutes. The fleet deployed and gathered again, and just as the perplexing question regarding the whereabouts of the little dog had been asked in vain for the third time, despite the usual variations, *Der Gotterdämmerung* precisely breasted the leeward end of the line at the second bang. The first leg was a reach and more from curiosity than sheer malice, the flotilla — fairly bunched to weather — edged down to see what the newcomer could do.

"*So-o*," muttered the doctor, glancing myopically at his friendly enemies, "*ve* vill yust ged on *A* sharp, und shtay dere! Maybe ve fool *diese dumme leute* vot don't know dot der qvickest vay between two points iss to go dere!" The wind was fairly strong off the land and *Der Gotter* —oh shucks! let's call her *that* and be done with it — rose slightly on her Nr. 3 convolutions and *went!* That is, she rolled darned fast on that fluted tummy of hers.

Just then, however, a delegation of 100 per cent pure American puffs, no doubt fully sponsored by the N.R.A. which had just commenced New Dealing, came from over the palm-fringed shore and, striking the fleet first, brought it down on the *Gotter* like a flock of hungry ducks. Having performed their patriotic duty, the puffs blew out and so we find the doctor, still steadfast to his trusty *A* sharp, trailing in the ruck. A couple of bars behind, as you might say.

"Vell, uder puffs, bedder luck," breathed the doctor comfortingly, as he turned his head to *E* for a moment and saw that already he was drawing up a bit. So theory Number One was not so bad after all, and he oriented himself back to *A* sharp again.

More wind now, accompanied by a veritable rabble of puffs, not so pure, that had no nationalistic affiliations whatever and were merely on the loose. In fact, there were nothing *but* puffs, and with each puff the *Gotter's* mast gave and her sails bellied and drew in again, the little *A* sharp pipe triumphantly humming above its fellows for all its worth, while the professor's *Selbstmörderisch* shot ahead with annihilating advances. Ach, but in the sunlight, how those elastic bights brought back such poignant memories of *der lieber frau*, so that the good doctor almost slipped off to *F* while blowing his nose. But he could not keep back the tears, and on he went, literally weeping his way through the fleet as with each successive puff his faithful little craft zoomed to weather or whooshed through the lee — it didn't seem to matter which — of the preceding boats. Soon they were all left astern of this rolling, weaving paragon that traveled as though she were a sailfish trained with a touch of turpentine. At the buoy the *Gotter* led by half a mile!

Jibing over, the doctor reversed his helmet for going down wind, and now on high *C*, he relaxed to the extent

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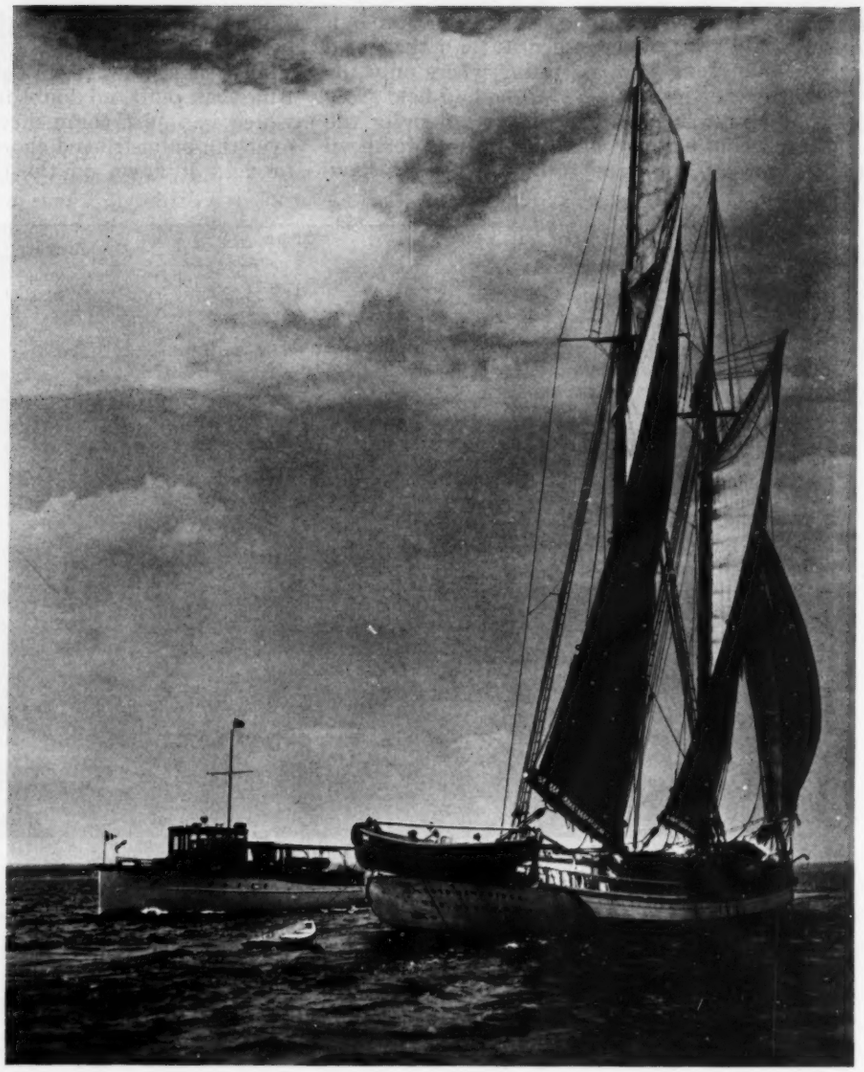
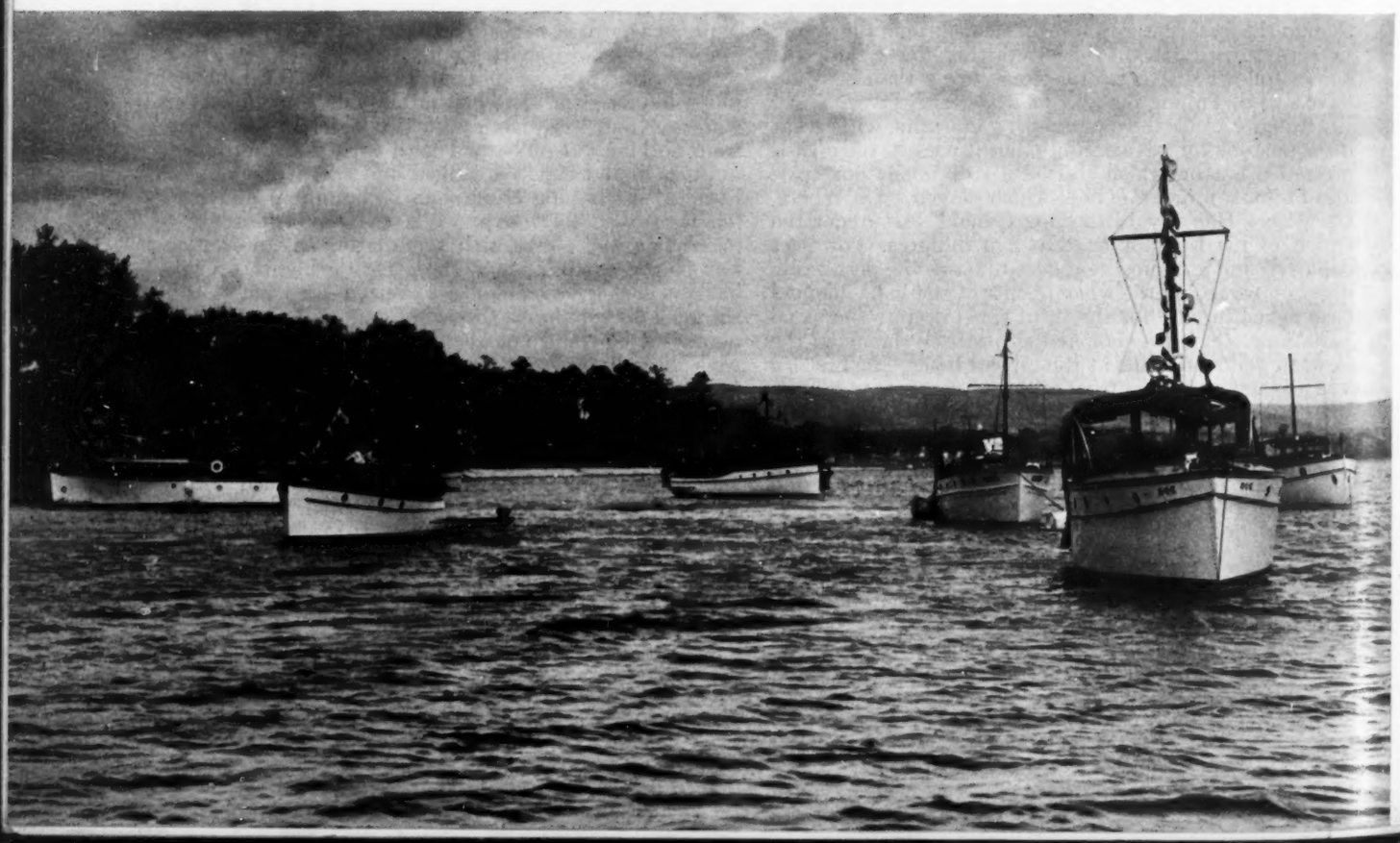
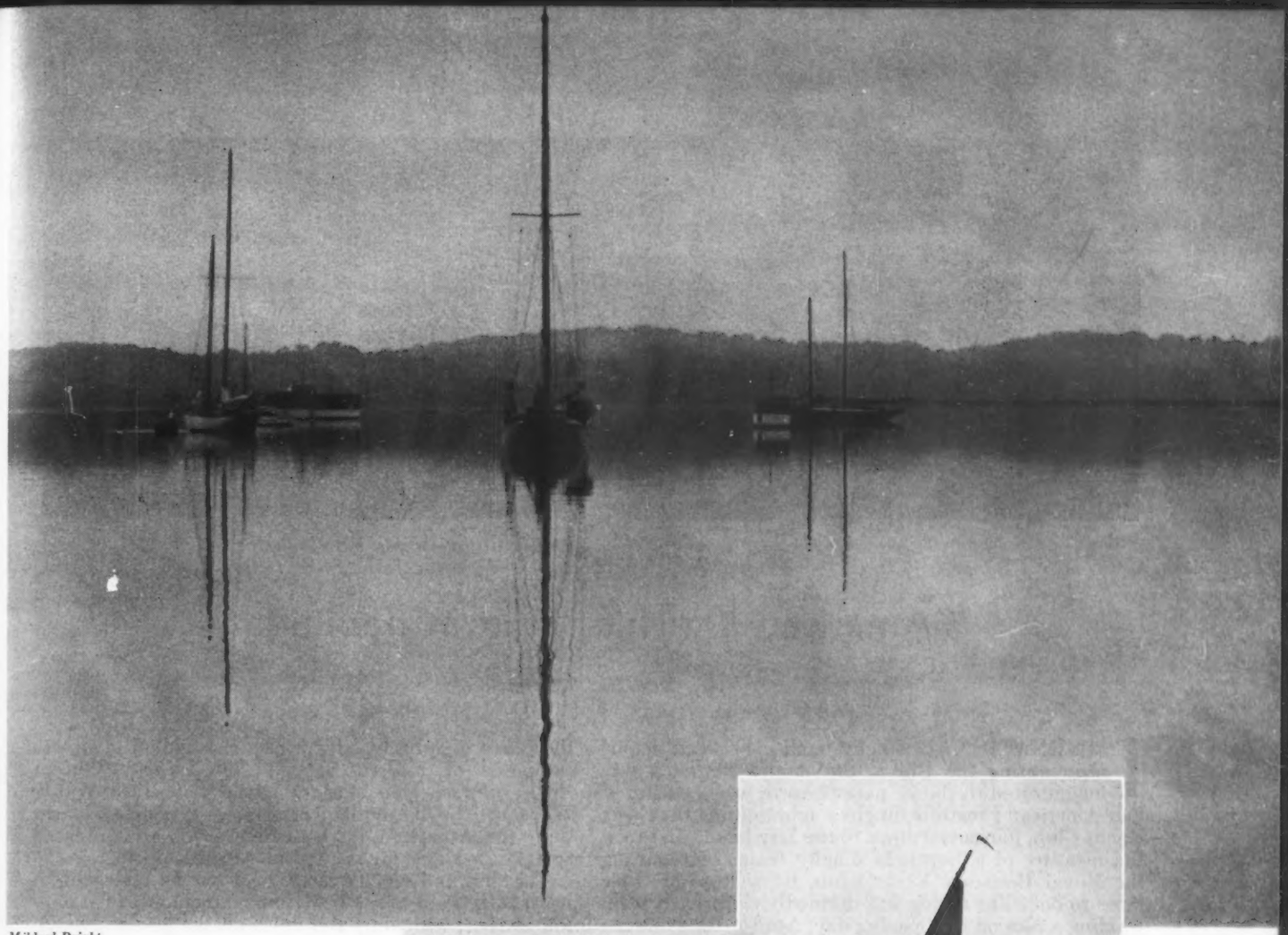


East and West Bound. A study in contrasts, from a photograph caught on the New York Yacht Club Cruise last year

Below. June marks the opening of the cruising season in northern waters. Yachts lying off the Seigniory Club, Ottawa River



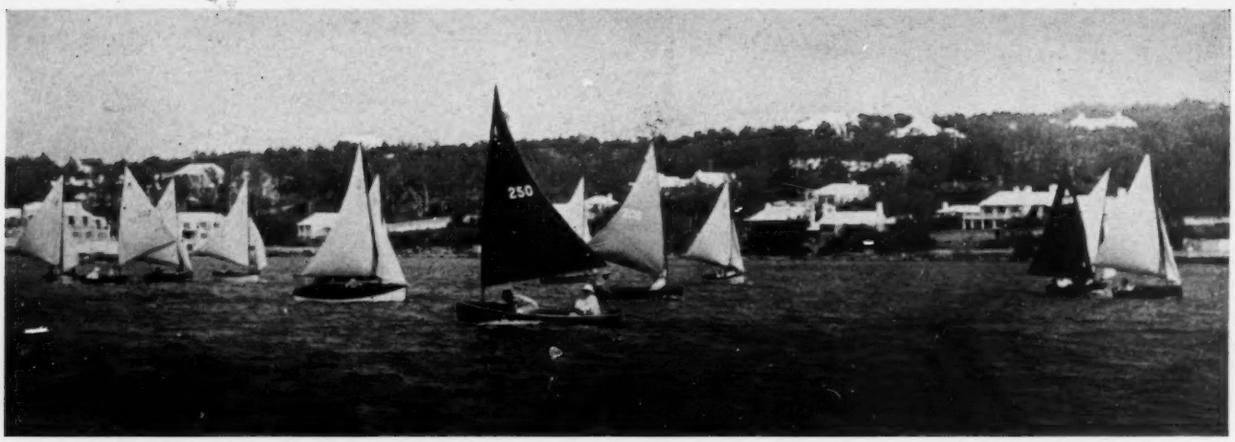


Mildred Bright

Flat Calm. The Connecticut River on a windless morning

Right. June also sees the racing season in full swing. The Sound Interclub "Arclay," sailed by Lorna Whittelsey

M. Rosenfeld



"Fifi" (A-250) leading in a free-for-all race sailed after the American dinghies had won the team match

American Dinghies Win in Bermuda

By SAMUEL WETHERILL

INTERNATIONAL dinghy racing between teams representing the United States and Bermuda was inaugurated the latter part of April, when a team of four American Frostbite dinghies, representing the Essex Yacht Club, journeyed down to the Lily Island and took the measure of a Bermuda dinghy team, representing the Royal Bermuda Yacht Club, by a score of three races to one. The racing was decidedly close, each team winning a race on the opening day, April 24th, while the Yankees came through on the following day with two victories to clinch the series and win the handsome challenge trophy presented by the Bermudians.

The four American craft were regulation Class A Frostbite dinghies of the North American Dinghy Association, and have been raced actively, winter and summer, for many months. The boats and skippers on the American team were as follows: *Fanny Dunker*, R. O. H. Hill; *Fifi*, Samuel Wetherill; *Liza*, Walter Rowe; and *Kerchoo*, B. V. Harrison. *Fanny Dunker* was designed by W. L. Warner, the other three being from the board of John G. Alden. The Bermudian team was composed of *Midget*, Bayard Dill; *Ripple*, Vincent Frith; *Skipper*, Don Masters; and *Puddle Duck*, Walter Wadson. The Bermudian craft were six inches longer than the American, and carried a jib and mainsail against the single lug sail on the American boats.

The first and second races, held on the afternoon of April 24th, were sailed over triangular courses in Hamilton Harbor, with start and finish off the new and handsome clubhouse of the Royal Bermuda Yacht Club, and turning marks off the Inverurie shore and the Princess Hotel. Interested spectators had a fine view of the races from both shores, while others followed the fleet in sail and power craft. His Excellency the Governor, Sir Thomas Astley Cubitt, was an interested onlooker from the yacht club verandah.

Light and very fluky southerly breezes in both the first and second races worried the skippers no little, and created many upsets on the windward legs. It looked as

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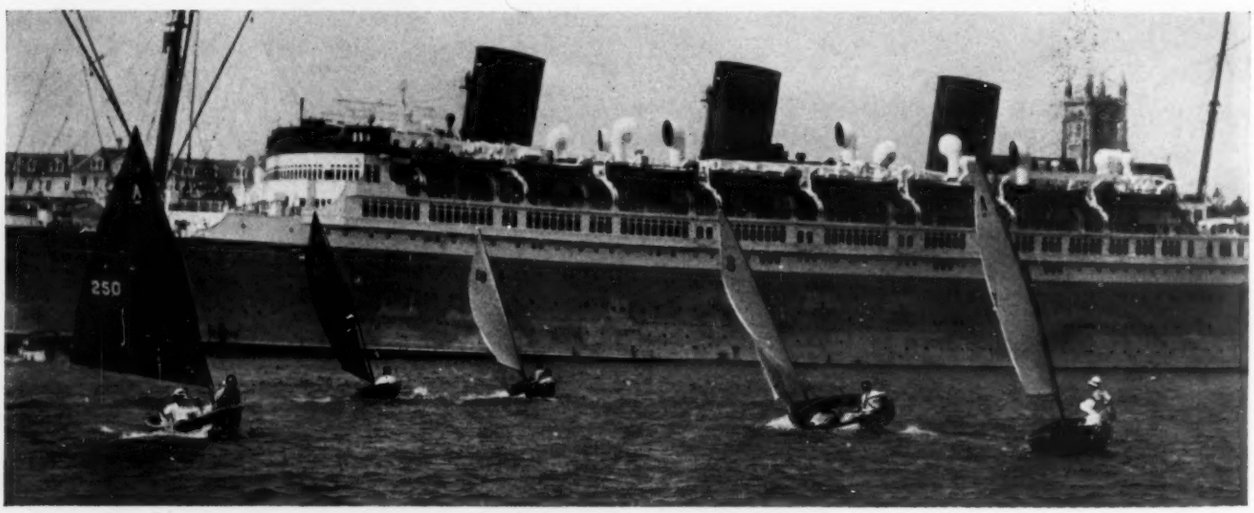


Maneuvering for a start in one of the dinghy races held in Hamilton Harbor between teams of the Essex Yacht Club and the Royal Bermuda Yacht Club

Hauling a heavy boat through the rapids is a herculean task

With Outboard Motors Through the Jungle

By A. HYATT VERRILL

NEARLY the entire population of Bartica crowded about as I unpacked the motor and proceeded to attach it to my boat at the little jumping-off place of civilization in the interior of British Guiana. It was a cosmopolitan crowd. Burly negro diamond and gold diggers — "pork-knockers" as they are called; sallow Portuguese traders; almond-eyed Chinese shopkeepers; half-naked, turbaned Hindu laborers; native Indians, some clad in ragged garments, others wearing only scarlet loin-cloths; British officials of the Lands and Mines Department; stalwart black "Bobbies," and naked children of every age, color and race. All were intensely interested as they watched me adjusting the first outboard motor ever seen in the district, the first ever to be used in tropical jungle exploration.

And when, with a roar, the motor started, my men cast off the lines, and the craft sped from shore, a rousing cheer rose from the watching throng. My own crew of six Patamona Indian paddlers, a Myagong Indian bowman, and the black camp boy, Sam, were as excited and as enthusiastic as the crowd on the river bank. But the grizzled old Boviander* captain, Boters, regarded the new-fangled affair skeptically and with obvious distrust.

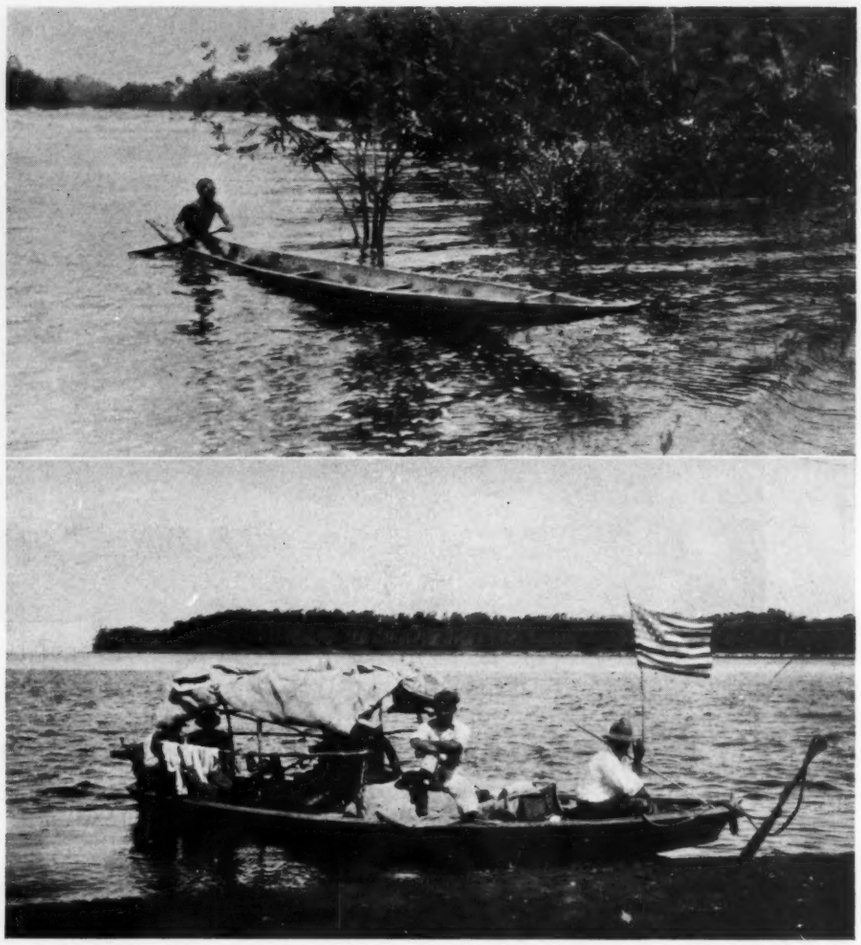
"Wa la!" he exclaimed. "Takin' de facts of tha case in consi'ation you boun' have trouble, chief. 'Spose you gwine up crick an' hit tacuba (a submerged log) what you gwine do? You gwine mash tha aperatix fo' sure, tha's what. No mistakin' 'bout dat, no, sir. Yassir, chief, tha's what boun' fo' happen."

**A person of mixed Dutch, negro and Indian blood. The name is a corruption of "Above yonder," applied to people living up the rivers beyond the settlements.*

The old riverman was right though it hadn't occurred to me. Everywhere, in the creeks and the jungle streams, were submerged logs, fallen trees and sharp-pointed snags known collectively by the Indian term *tacuba*, and to strike one of these with the swiftly-rotating propeller would most assuredly "mash up" the motor. And it was in navigating such waterways that I counted most upon the motor.

There is a time-worn saying that needs must when the devil drives; and there is an equally trite expression regarding necessity being the mother of invention. Also, it is said that great minds work together. But scientists, especially ethnologists, express the same thing otherwise. Like conditions beget like results, they say. Faced with the necessity of overcoming the danger of snags, I hit upon exactly the same idea and device which, since then, has been embodied in nearly all outboard motors. In other words, I constructed a tilting device consisting of a motor support hinged to the stern of the boat, for it must be remembered that this took place back in the early part of 1915. In those days outboard motors were, figuratively speaking, in their infancy and no one dreamed that they would ever be developed to their present perfection, size and power. Like the automobiles of the period, they were low-powered, and were so much of a novelty that they invariably excited curiosity wherever they appeared.

Mention of tropical exploration usually brings visions of tramping wearily through dank forests, hewing one's way through dense jungles, wading miasmic swamps, toiling over mountains covered with rank vegetation and tangled undergrowth; facing hardship and danger. But in many sections of the American tropics — notably in the Guianas and Brazil — the explorer scarcely need set foot in the real jungles, for practically all traveling



A "coorial," a narrow, dugout canoe, which is a common conveyance on the rivers of British Guiana

Bottom. Equipped with an outboard motor, this boat carried the author and his party over more than 5,000 miles of swift jungle streams

is done in boats or canoes upon the rivers and streams that form a net of waterways connected by narrow jungle creeks or *itabus*. The canoes may be either narrow dugouts called *coorials*, or "wood skins," craft formed of a single cylindrical section of bark from the purple-heart tree, while the boats used are spoon-bottomed, heavy affairs, carvel-built of strong native wood. Wherever practicable, these river boats are the craft employed and are handled by paddlemen, the number depending upon the size of the boat, which may be anywhere from twenty to forty feet in length, a bowman and a "captain," each of whom wields an immense steering paddle.

The innumerable rapids and falls of these jungle streams are the greatest difficulties with which the explorer has to contend. When descending the rivers they are not so bad, for usually they are run, and there is no more thrilling experience than to run through mile after mile of seething, foaming, rock-strewn rapids, with the Indian crew yelling like — well, like wild Indians; with the bowman perched precariously forward, swinging the craft's leaping prow aside from threatening rocks, and the captain straining at the great stern paddle. But in ascending the streams it is a different matter. Rapids and falls must be slowly, laboriously hauled through by main strength. Wading up to their armpits in the maelstrom, swimming, clinging to slippery rocks, the men haul, strain, and tug at the lines hour after hour. Often, too, it becomes impossible to drag the heavy boat through the series of falls and cataracts against the terrific current, and long portages have to be made. And to haul a 25-foot river boat over jagged ledges, through jungles and forests, and often over good sized hills for a mile or more is herculean labor. As a result, when the stretches of smooth water between rapids are reached, the men, exhausted by their terrific exertions, are incapable of paddling except at a snail's pace.

Having made a number of expeditions into the interior of Guiana while conducting ethnological explorations, and, incidentally, having come most unpleasantly near starvation owing to unforeseen delays in traversing the rivers, it occurred to me that by using an outboard motor in the smooth stretches of water I could allow the men to rest and recuperate after their strenuous work of hauling through rapids, and also make far better speed than by paddling. To be sure, the motor and gasoline would add to the boat's cargo, but I felt that this would be more than offset by the fact that by making better time I could reduce the quantity of supplies. At any rate, I determined to try the experiment. From the outset, it proved a tremendous success.

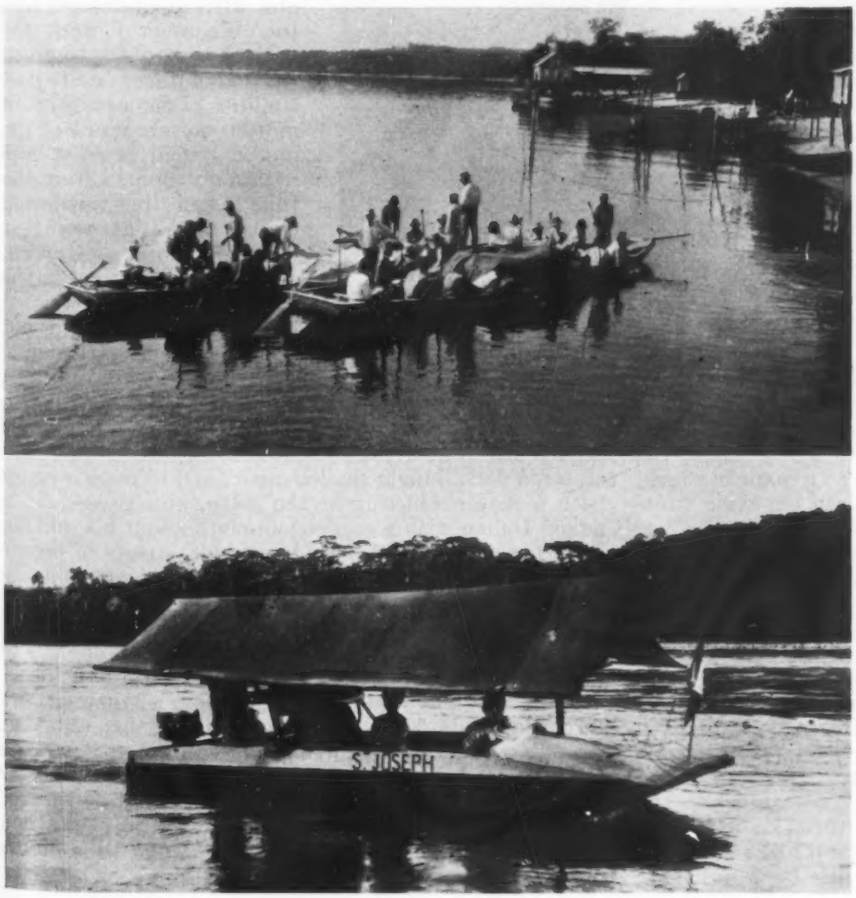
The first motor that I used in jungle explorations was a single-cylinder Ferro rated at three horse power, a tiny affair equipped with a Schebler carburetor and Bosch magneto, but a good little motor, nevertheless. Small as it was, that little engine drove my 24-foot river boat, with its nine occupants and 1500-pound cargo, for thousands of miles over the rivers of Guiana and Venezuela. And never once in all that time, whether in torrential downpours or during days and even weeks of incessant rain, did the motor fail for an instant. In smooth water it drove the loaded boat at a six-knot clip while the men rested and loafed. In many of the rapids it aided immensely in forcing the boat upstream through the current, and the time saved by its use enabled me to carry out much longer trips than would otherwise have been possible. And it proved a most valuable acquisition in a manner unforeseen and entirely unexpected.

To the primitive Indians of the interior the "devil in the box that paddles" was mighty *peai*, or magic. That it was a tame devil and quite harmless when under my control they were sure, for were not their fellow tribesmen there in the boat with it, quite unafraid and unharmed? But it had a most terrible and angry voice, it must be a most powerful and strong devil to propel the boat faster than the paddles of eight men, and they had no desire to arouse its anger or to do anything

to displease it or its master. So, whenever I pulled in to an India[illegible] village, the Indians welcomed us with open arms. They traded readily, and aided us in every way. Me, they regarded as a most superior sort of white man, for no other had been able to capture a devil, shut him up in a shiny box and force him to labor incessantly to paddle a boat at command.

Many an amusing incident resulted from the use of that first outboard motor ever to arouse the echoes of the Guiana jungles with its staccato exhaust. One old chief who lived near the settlements and had acquired many of civilized man's ideas — as well as his vices — was so fascinated by the motor that he offered anything he possessed, even including his favorite wife and a comely daughter, in exchange for it. But for my purposes a motor was of far more value and utility than female aborigines, and I declined his offer. The old fellow was absolutely disconsolate until he learned that my motor was not the only one of its kind in the world. Then he brightened up instantly. He would buy a motor for himself and, having made a trade with me and thus having established a credit sufficient to pay for the machine, he commissioned me to order a duplicate motor and deliver it to him. In due course of time the motor arrived and was delivered to the Indian by one of my men. Several weeks later I met the old chief traveling on the river. There he was in his canoe, the motor glistening in the sun on the stern of his craft. But there was no sound of an exhaust, and the old chap was paddling. When he drew near, grinning from ear to ear, chuckling with glee as he pointed proudly to his motor, I discovered that the machine was lashed *upside down* to the canoe and had never been used! To the chief it was merely a symbol of superiority, perhaps something of a talisman, an object to make his less fortunate tribesmen envious, but entirely beyond his comprehension as far as utility was concerned. On another occasion, while traveling up a stream, we rounded a bend and came unexpectedly upon an Indian seated in his canoe fishing. Instantly, at sound of the muffled exhaust, he leaped to his feet and stared terrified at the shining thing on the boat's stern. A boat moving swiftly along without paddles was to him incredible, uncanny. And when, just to see what he would do, I opened the cut-out and the exhaust roared, shattering the silence of the jungle, the fellow let out one terrified shriek, leaped overboard and swam madly for shore.

But perhaps the oddest and most amusing occurrence was when the boat with its motor was mistaken for a German Zeppelin. I was bound for a Carib village, and followed a shallow winding creek. Because of the sharp bends and water-weeds, it was impractical to use the motor, which was tipped up with its shaft and propeller pointing at an angle above the stern. As a protection against the sun, we had rigged a shelter by spreading our tarpaulin over bent saplings, thus forming an arched canvas tent much like the "covered wagon" in appearance. For hours we crept along, the boat's hull hidden behind the river banks, only the rounded canvas covering and the uptilted, glistening motor visible from a distance. And when at last we reached the Carib village, we found it deserted. Not a human being was visible. Fires still smouldered in the open-sided huts, pots with half-cooked food stood about, hammocks and other belongings of the Indians were all in place. Obviously, the Caribs had cleared out in a hurry. We were totally at a loss to account for their actions as the inhabitants of the district were the most intelligent and friendly of tribes, and were in constant touch with the settlements and civilization. In vain we shouted, calling to the silent woods — in both Caribbee and English — that we wished to trade, that we were friends. Not a sound, not a word came in reply. But at last, after searching the neighboring jungle, we discovered two small boys fairly shaking with terror as they hid in the underbrush. Having calmed their unaccountable fears by the judicious use of presents, we at last succeeded in learning the truth. The Caribs had heard of Zeppelin raids on London, they had seen pictures (in Georgetown) of the German airships, and seeing the strange oval structure moving across the savannas, with a shining metal object projecting

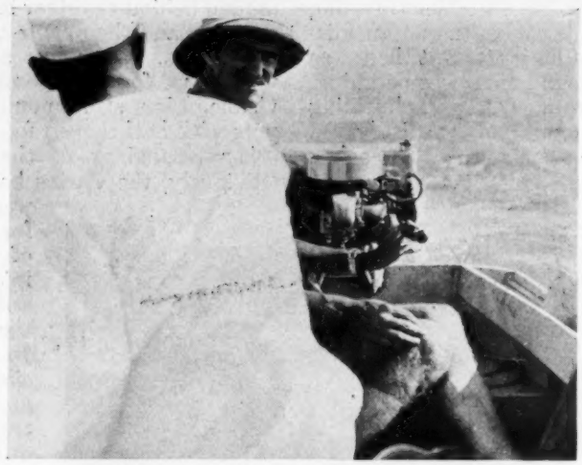


Top. Ready to set out from Bartica for the gold and diamond diggings

Going up a South American river. The outboard saves many hours of weary work at the paddles

from the rear, they had been convinced that the German air-raiders were descending upon their village, and they had fled to the bush for their lives. When, eventually, by using the reassured boys as emissaries, we succeeded in luring the frightened Indians back to their homes, they laughed as heartily as any of us at their ludicrous mistake.

In only one respect did the outboard motor prove a failure. Its noisy exhaust terrified all game and sent deer, tapir, even monkeys, scuttling for cover miles before the boat came in sight. Hitherto, we had often eked out our provisions by shooting deer or other game as we came suddenly and silently upon them, drinking or feeding at the riverside. But once we had the motor, game vanished as if by magic, and to secure fresh meat we were forced to make long trips into the jungles. Yet, on one occasion, the motor enabled me to secure a jaguar in a manner which, I believe, stands unique in the annals of big game hunting, if so it could be called.



An Evinrude on the stern equals the work of many men. (Top) Hard going. Hauling through rapids by main strength

We were descending the Mazaruni — swinging along at a good nine knots with the swift current — when one of the men pointed ahead to where some animal was swimming across the stream. Thinking it a deer, or possibly a tapir, I swung the boat towards the creature, with the expectation of securing fresh meat. But as we drew alongside I saw to my surprise that it was a good-sized jaguar. To this day I cannot really say why I did so; but as the jaguar turned and we swept past, unable to check the boat's speed, I reached over and seized the beast's tail. At the speed we were traveling the jaguar was helpless; he could not turn, he could not scratch or bite, he could not even keep his head above water, but was dragged under. Grimly I held on, until at last, slowing down the boat, I hauled the drowned animal aboard, probably the only jaguar ever killed in such a manner.

A volume might be filled with accounts of my trips through the jungles of Guiana with an outboard motor. Wherever I went the natives were quick to grasp the advantages and possibilities of the new form of motive power. Word of the motor spread rapidly, and within six months from the time when the wondering crowd gazed at the first outboard motor at Bartica, there was not a river in the colony where the exhaust of an outboard could not be heard. Wherever there were villages or settlements, boats, canoes, bateaux — even lighters — were equipped with motors. Negroes, Portuguese, Hindus, British, even the aborigines used them. It was no unusual occurrence to hear the staccato exhaust of an outboard on some dark, jungle-shaded creek, and to meet a canoe with a motor whirring at the stern, and steered by a naked Indian with a scarlet loin-cloth about his middle, a feather crown on his long black hair, strings of jaguar teeth about his neck, bow and arrows resting on the thwart beside him.

Although my first little motor performed excellently and never gave trouble, it was not powerful enough to drive the larger boat with a much heavier load which I used on one long and difficult journey, a trip that was to cover hundreds of miles of coastal streams, and that would necessitate going many miles out to sea from the mouth of one river to another. So I bought a new motor of modern design. All might have gone well had it not been raining in torrents when we started out and had not the motor been drenched. For three solid hours

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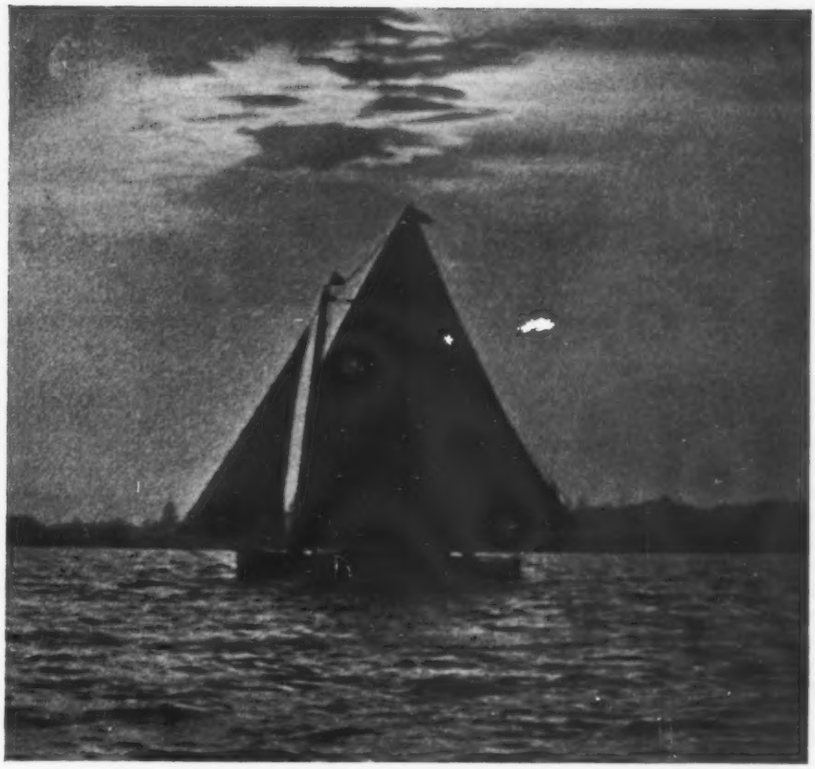


The ex-salmon boat "Butcher Boy" when she became a yacht — and a fairly fast one

The Salmon Boat

A Double-Ended Fisherman Once Popular in Southern California

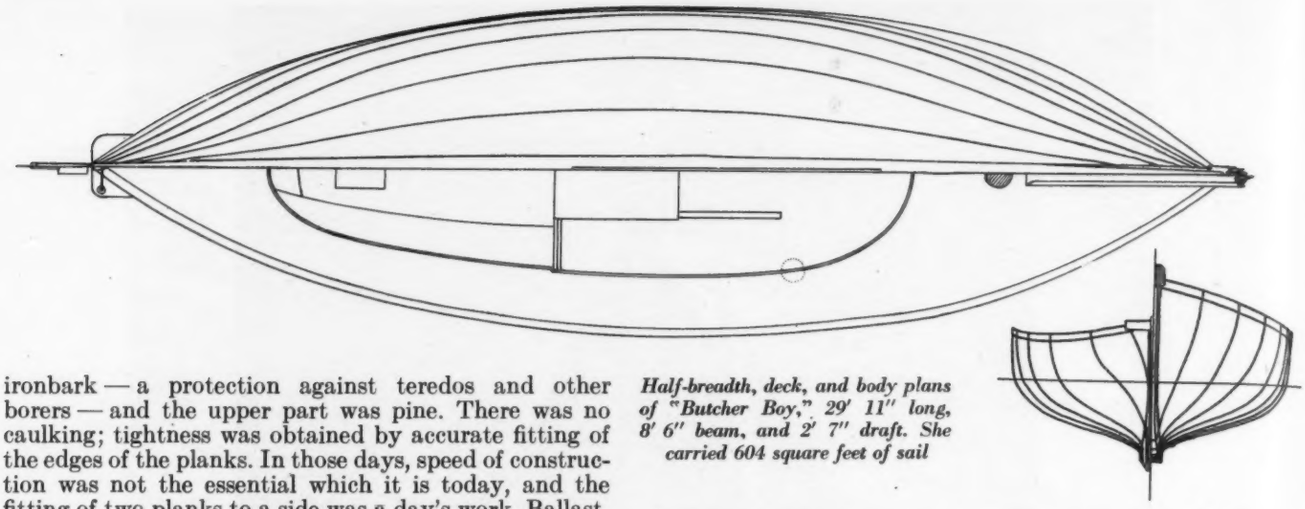
By JERRY MacMULLEN

DURING the latter part of the eighties there appeared in Southern California waters a type of fishing boat which held sway, by reason of its superior qualities at sea, for more than a quarter of a century. It was a double-ender, of a type known as the Columbia River salmon boat — although salmon in Southern California waters are about as plentiful as dinosaur eggs.

About the real origin of the model, fishermen around San Diego seem to differ. Some say that it is a direct descendant of the life boats of the North Sea. Others are even more positive that it came from the Azores. As most of the early boatbuilders of San Diego were Portuguese, the weight seems to be on their side of the argument. All agree, however, that the boat was brought in from the Columbia River and from San Francisco, those from the latter region showing something of the influence of the Monterey boat — which is another story again. The first salmon boats came to San Diego on the decks of steamers, from San Francisco. Then local boatbuilders began turning out the models, and continued to build them until gasoline finally drove sail from the fishing banks.

The earlier salmon boats were open, about 25 feet in length, and carried their fish loose or in portable fish boxes. They were sloop-rigged, with short bowsprits, and only the extreme bow carried any deck. The hulls showed moderate deadrise, fairly easy bilges, and concave water lines. Later the boats were built with decks running the entire length, and with three small hatches. The forward hatch, or cuddy, opened into a hold which housed the gear and gave shelter to the fishermen on the infrequent occasions when there was night work. Under the main hatch was the fish box, with sides which could be removed to accommodate a large catch, the surplus fish spilling out to the bilges. The after hatch, or cockpit, was for the accommodation of the helmsman, who was also, in many cases, the entire crew. A bulkhead separated the main or fish hold from the forward space. Nothing projected above the deck except the hatch coamings and the iron rod with which the centerboard was lowered or raised. Jib sheets were led to the cockpit through wooden fairleads, and the main sheet passed from a cleat on one side of the cockpit, through a single block on the boom, and back to a cleat on the other side.

The keel of a typical salmon boat was of oak, 4″ by 8″, while stem and sternpost were of oak sided 4″. Frames were of 1⅝″ by 1⅝″ oak, steam bent, and were spaced 11″ on centers. Planking and decking were of ⅞″ Port Orford cedar or spruce. While some of the boats were fastened with 2″ boat nails, the majority were copper riveted through the frames. The centerboard was of 1″ oak; the lower part of the centerboard trunk was of 2″



Half-breadth, deck, and body plans of "Butcher Boy," 29′ 11″ long, 8′ 6″ beam, and 2′ 7″ draft. She carried 604 square feet of sail

ironbark — a protection against teredos and other borers — and the upper part was pine. There was no caulking; tightness was obtained by accurate fitting of the edges of the planks. In those days, speed of construction was not the essential which it is today, and the fitting of two planks to a side was a day's work. Ballast, all inside, consisted of a ton and three quarters of iron, and the boat's normal capacity was a ton of fish.

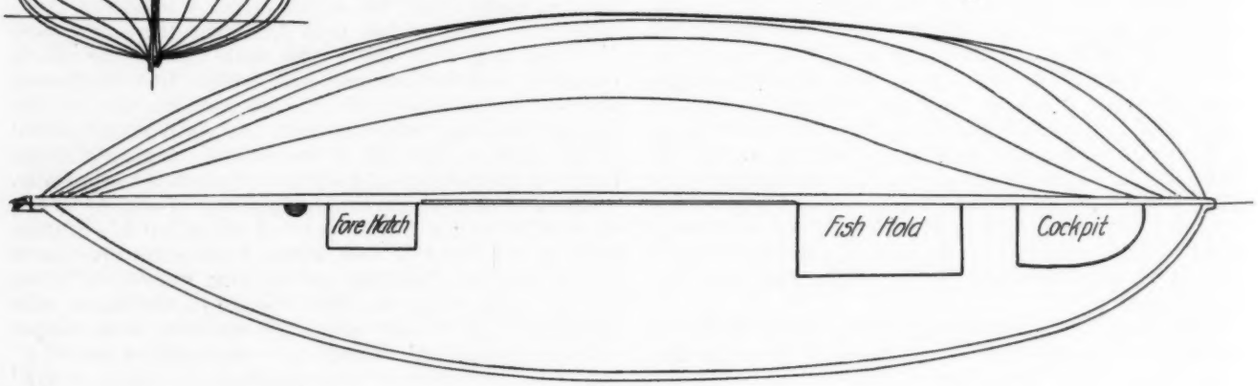
The fishermen, generally single-handed, would start out of port long before dawn, propelling their boats with 14-foot sweeps. By the time they reached the banks and got to work, there was plenty of wind for trolling, and they would load up with barracuda and other market fish and return to port. The speed of the boats led to a good deal of racing, both on the way in from the fishing banks and on Sundays and holidays.

For a number of years, the writer sailed a salmon boat converted to a yacht. She was built by Manuel Goularte, a native of the Azores, from a whittled-out model. She was satisfactory in every way, and unusually comfortable at sea. She was more stable than the purely fishing models, carrying, in addition to her iron, 2,000 pounds of lead outside, on the shallow keel. The lead ran the entire length and even projected about two inches abaft the forward edge of the rudder — a handy trick when you want to run through kelp without having anything hang up. Her lines were finer than those of the earlier models, and she was larger — just under 29 feet on the water line. Originally, she was flush-decked, with a short cabin and two hatches. Later, the two hatches were joined to form a roomy cockpit and the cabin was extended aft. This arrangement gave four berths below by running two of them out under the cockpit seats.

While her long keel made her slow in stays, she was a delight to steer at sea, and was fast and comfortable. And when it got nasty, she went through the water with far less pounding and fuss than her modern rivals. Of course, such a model is not the best thing for smart windward work, but with a quartering or beam wind,

(*Continued on page 94*)

Lines and sail plan of the 25-foot salmon boat "St. Joseph," another veteran double-ender. Her sail area was 418 square feet



A First Aid Outfit for Cruisers

It Can be Stowed in a Tin Cracker Box and Kept Sealed Until Needed

By WILLIAM A. THOMAS, M.D.

THE primary requirements of the medical and first aid supplies for cruising are as follows: Compactness, a specification needing no further comment; simplicity, because the average skipper, overawed by too complex a list, probably ends by taking nothing; and durability, since some of the items may deteriorate rapidly with dampness and time. Too often, assured that the ship carried a fine first aid outfit, have I found a conglomerate, sticky mass of bandages, iodine, pills, and tape. Naturally, only the simplest procedures and medications are feasible while at sea and without professional aid, and the adequate supplies can well be stowed in an ordinary one- to two-pound cracker box, or a tin-lined cake box, sealed with adhesive tape at the cover edge. At least once a year the entire outfit should be overhauled and any defective material, especially adhesive tape, replaced.

Of primary importance is the following list of first aid surgical supplies:

Adhesive tape: Spool 5 yards by 2 inches — in air-tight container.

Roller bandages: 1 dozen, assorted widths from 1 to 3 inches.

Flat gauze: 1 dozen sterile gauze pads in wax paper. May be impregnated with boric acid.

Tongue depressors: 1 dozen, wide — for small splints.

Adhesive compresses: 1 dozen boric acid or mercurochrome — for handy dressing of small injuries.

Antiseptic cotton: ¼ pound.

2 ounces tincture of iodine in glass stopped bottle, or 2 dozen carefully packed iodine swabs, the solution in glass ampules — to be broken for individual use.

Or, mercurochrome, either 2% solution, or preferably the tablets to be dissolved as needed.

Of the simple medicines, I would list the following:

Aspirin: in 5-grain tablets.

Paregoric: 4 ounces. This may require a prescription to obtain. For diarrhea or severe abdominal pain — 1 to 2 teaspoonfuls every hour.

Tannic acid: 6 ounces of 2% solution for use on burns. Apply directly to burns or cover with moist dressing of this.

Or, Butesyn Picnata: Large tube — apply to burns.

Epsom salts: ½ pound. Tablespoonful in water as cathartic.

Tablespoonful in 1 pint of water is an excellent wet dressing for infections, abscesses, boils, etc.

Surgical equipment:

1 long, curved forceps — especially for extracting fish bones from throat. With direct light or flash light, a tongue depressor, and patience, the bone can almost always be located, frequently near tonsils or in soft palate, and the extraction is ordinarily simple.

3 tubes sterile catgut and several curved surgical needles.

There is no reason why the skipper or a volunteer from the crew cannot do a bit of embroidery or hemstitching if required. Needles are boiled, the glass tube containing catgut broken, the forceps used to hold the needle, and a few simple stitches, tied with square knots, used to bring together the edges of gaping or bleeding wounds. Scalp or face injuries, particularly, require stitches if the edges cannot be firmly approximated with adhesive tape.

Numerous good first aid kits are on the market, with selections and variety to fit every need. Among the most excellent are those of Johnson & Johnson, and Burroughs, Wellcome & Co., who make a specialty of such equipment for explorers and expeditions. They have devised a method of compressing a roller bandage about the size of a fist into a compact volume of one-fourth that dimension and sealing it with cellophane in such a manner that any desired amount may be used, the rest

remaining sterile. Their medium sized outfit, with the addition of a very few of the special items I have enumerated, makes an ideal equipment.

In his "Just So Stories" Kipling aptly remarks that a sailor must be a "man of infinite resource and sagacity" — and this I have frequently observed to apply to his medical exigencies. This article cannot assume the proportions of a first aid compendium, nor does the average skipper care to undertake other than the simpler mechanical and therapeutic procedures, but a few semi-professional suggestions may be of value.

For contusions, direct blows, crushed fingers or hands, or sprains, immobilization by padding with cotton, and snug, but not tight, bandaging is all that can be done. Cold water may delay swelling, hot water may relieve pain, but the ultimate course of recovery is not affected. Protect the injury, keep it quiet, and let it heal. I am an ardent disciple of stopping pain, and in severe pain, such as burns or extensive injury, only morphine will accomplish this end. The skipper, if not too shaky or debauched, should have no difficulty in obtaining a prescription from his family physician for half a dozen quarter grain tablets of morphine, one to be put under the tongue and held for three minutes. There are times when long days of unnecessary suffering may be thus relieved. In less severe instances of pain, liberal use of aspirin — fifteen to twenty grains in a dose, this to be repeated after three hours if necessary — will give grateful relief, particularly in neuralgia and the rheumatic conditions, without incapacitating the patient.

Frequently a cruise follows a period of fatigue, hurry and strain from the necessary preparations for absenting oneself from business, which results in lowered resistance to infection, especially colds. In a race, of course, these disabilities must be ignored, but, when conditions permit, thirty-six or forty-eight hours of easy going, with ample rest and minimum exposure, will effect a complete cure, making the remainder of the cruise a pleasure rather than a trip on a hell ship.

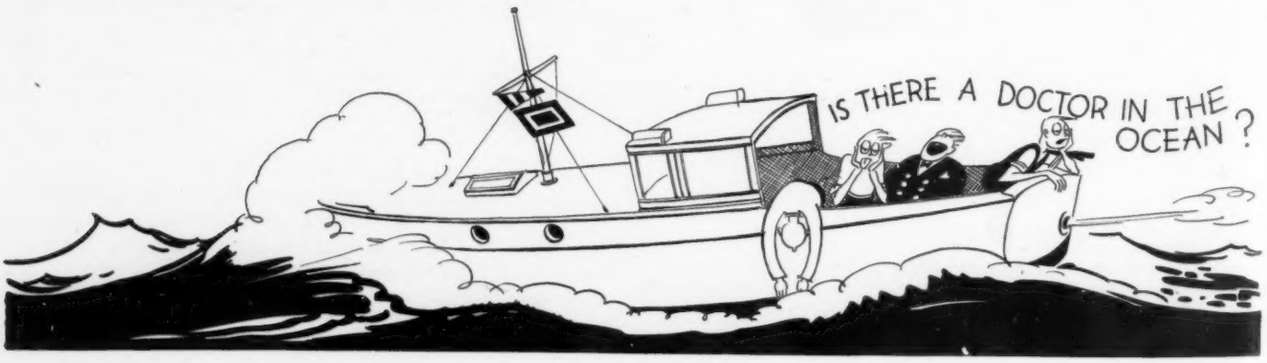
A clinical thermometer is a most useful article of medical equipment but, like a sextant, its value lies in the correct interpretation of the readings, and I am in some doubt as to the average skipper's reactions in case he finds fever. Its presence, especially 100° or above, granted the thermometer has been shaken down below 98° and read before taking the temperature (clinical thermometers do not descend on the scale with lower temperatures, but remain at the last reading until shaken down), indicates trouble, and the individual should be given due consideration. High fever, if persisting in the presence of symptoms of illness, requires medical oversight, and the patient should be taken to the most available source, though it is usually a simple matter to determine whether or not a critical or urgent situation exists. The conscientious skipper will do well to invest in a small first aid handbook, many of which are clearly and understandably written, giving more detailed instructions, and he may while away many a weary hour familiarizing himself with "What to do till the Doctor Comes."

On longer trips, inadequate bowel elimination (vulgarly, constipation) is an insidious but potent source of meanness among the crew. While the skipper, with all his omniscience, cannot be an Hippocrates (even some of Christopher Columbus' boys had trouble), he can make his own lot easier by requiring reasonable diligence in this respect. While I do not insist that the crew raise a hand and ask to be excused, or even make chalk marks on the door in the manner of baseball fanatics, I suggest that at signs of impending mutiny, or even individual evidences of dissatisfaction, all hands be piped aft and a ration of laxative dispensed all around. This procedure is rendered infinitely less arduous if a suitable chaser is dispensed. However, generalized epidemics of constipation have been known to follow such a procedure.

As a general stimulant, in case of fatigue, chilling, or collapse, coffee heads the list. Alcohol, speaking seriously, has an immediate and distinct value, but its effect is temporary only.

When I review, in a relatively honest and impersonal manner, my own value on numerous and, at times, prolonged cruises, I find that approximately 95 per cent of the credit goes before the mast and a scant 5 per cent appears on the log as of actual medical value. On an occasion when a paid hand had acquired a deep laceration of the forearm while fighting a broken gaff jaw, I hied me below, made careful preparation, and hastened to practice my art on the poor fellow, only to find him with waxed thread, a sail needle and palm, taking the last of seven neat, even, sail stitches in himself. Again, in a Bermuda race, having been assured by the Scandinavian hand that he had aspirin, I neglected to lay in any great supply. Later on, the emergency having arisen, I called for some aspirin. The huge paw, descending to the depths of his pocket, emerged with a double handful of débris. He blew away tobacco crumbs, picked out a gill of nails and screws, three pencil stubs, a wad of oakum, a gold crown, and pounced upon two dilapidated pellets of approximately the size, shape, and avoirdupois of aspirin. These I triumphantly administered to the patient, only to ascertain that they were compound cathartic pills — which, however, were the precise requirement for the condition.

The moral, or "l'envoi" as the landlubbers say, is to have aboard the minimum of requirements, know what and where they are, when and when not to use them, and if there is a physician in the audience to put him on the mainsheet.

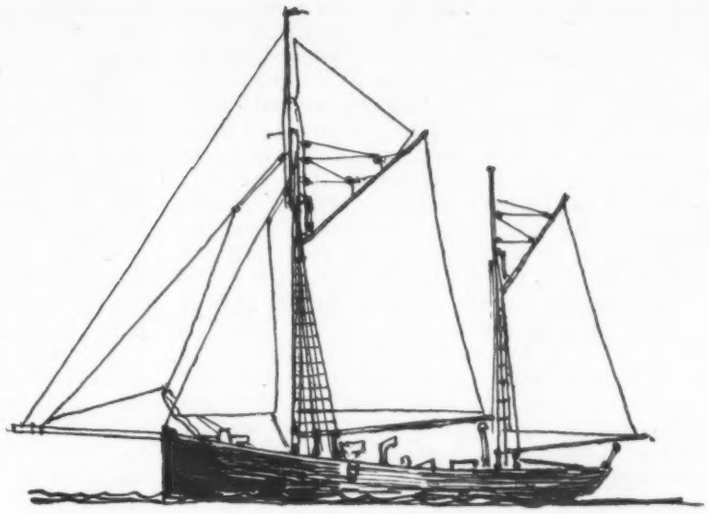


A North Sea Gale

In Which the Smack Lowestoft "Primrose" Got the Devil of a Dusting

By

ROBERT SOMERSET



"Primrose" was a Lowestoft smack, solidly built to stand the hard knocks of winter trawling in the rough waters of the North Sea

THE North Sea is a bad place in winter time, and particularly off the coast of Holland where the water shoals a long way from the land. It was here that I weathered a hard gale a number of years ago in the fishing smack *Primrose*, out of Lowestoft.

Of the ordinary North Sea type of fisherman, *Primrose* was a fine, able vessel, straight-stemmed and ketch-rigged, with a bold sweep of sheer, and about 60 feet long over all. Early in November of that year she was at sea off the coast of Holland trawling for plaice. She had been out for about five days, throughout which the weather had been bad, as it frequently is at that time of year, so that her pounds held but a poor "trip" of fish.

On this particular day *Primrose* was towing her gear under one reef and, the tide being nearly done, would have been just about to haul her trawl. The weather, however, had been gradually getting worse all the evening and the glass was dropping away fast, so the skipper decided to jibe 'round with the gear down and tow it at least part of the next tide without hauling, as it seemed certain that it would be necessary to stop fishing and heave to before many hours had passed. It was about 9:00 P.M., and dark, so that getting the flares lighted and the trawl gear ready for coming 'round took a certain time, especially as the vessel was throwing herself about a good deal. The wind was increasing fast. The crew were all busy and, once having considered the weather and decided that a jibe was possible, they took little notice; though when all was ready and they took their stations for the jibe, it was obvious that it was going to be an unusually heavy one. But a North Sea trawler is nothing if not sturdily rigged, and it would never have occurred to any skipper out of the port to worry about this.

Jibing in a strong wind with the trawl down is an especially brutal operation. The vessel is put off before the wind as far as she will go, and the mizzen boom is then hauled over with the steam capstan. On this occasion the sail came over with a slam like that of a banging door, and the boat began to pay off rapidly. The mainsail filled aback for a second, then the boom swung over. There was a splintering crash as the mast went over the side, and the weird glare of the kerosene flare showed one of the crew lying under the mass of sails and rigging on the fore deck. It seemed certain that he must be badly injured, if not worse, but, to everyone's great relief, he got up quite unhurt. He had fortunately crouched down on deck on hearing the mast go and had been saved by the high bulwarks which took the shock of the falling gear.

It was now blowing a real gale of wind, and attempts to salvage anything from the mass of spars, sails and rigging, all tangled up in one great mass in the water over the port bow, soon proved to be quite useless. The mast or boom was also bumping heavily against the side. The axe was therefore fetched on deck and the whole lot cut adrift. By midnight the work was done and the ship was lying to the trawl, head to wind, the warp, 120 fathoms of six-inch manilla, having been led to the bows, and the mizzen close-reefed and kept steady by tackles on the boom. One hand was left on deck to watch for passing ships and the rest went below to look at the chart and consider the situation.

Our position was not a particularly good one, the Dutch coast being only some forty miles to leeward and the glass still dropping fast. On the other hand, the trawl was holding us well and, as the North Sea is a populous place, we had little doubt that someone would pick us up before we got uncomfortably near.

Later in the night the lights of a small steamer were seen about a mile to windward and flares were lighted to attract her attention. These, however, are too commonly used by fishing boats in the ordinary way to be of much use as distress signals in the North Sea and, as we expected, had no effect.

At daylight a big sea was running and it was blowing really hard. After a fish breakfast, an unusually good one as there seemed no point now in keeping the best fish for the market, everyone went on deck to see if there was any chance of getting sail on the stump of the mast. This had not gone at the deck, but where the jaws of the gaff came with the mainsail reefed. There was, therefore, twenty feet or so still standing. But this was quite bare and, of course, far too big in diameter to climb easily even in a calm. It was tried as a forlorn hope but, with the violent motion, proved quite impossible.

We then tried for a long time to throw a rope over the splintered top of the mast, but were unsuccessful in this also. A distress signal was therefore hoisted on the mizzen, a fish basket taking the place of the regulation cone and a wheft being made by tying up our red ensign in the center, and we resigned ourselves to await being salved. Judging by Atlantic standards, the seas in the North Sea, south of the Dogger, are not big, but in a westerly gale off the Dutch coast they are big enough, and the shoal water and strong tides make them extraordinarily steep, so that for a small boat they are bad. Yet, kept head to the sea by the trawl, the *Primrose* lay well enough, though she was wetter than if hove to under sail, as she pointed directly into the wind instead of about five points off. The steam bilge pump had to be kept going a great part of the time, but she was an old boat and, like many trawlers, which get strained after a time by towing the warp over the rail, always leaked a good deal in heavy weather, so this caused no anxiety. We always looked upon her as perfectly sound and seaworthy but, as she foundered in a bad gale some years later, I suppose we were wrong.

During the day, several large steamers passed not more than two or three miles off, but paid no attention to our signals. They may possibly have taken us for a herring drifter, as these boats always lower their foremasts when riding to their nets.

The gale continued all that night, while next day the weather appeared worse, if anything, and the bottom dropped right out of the glass. Ours read a fraction below 28 inches and, though I hardly think this was very accurate, it was probably not so far wrong.

Several more steamers passed us, one even altering course to have a closer look, but, like those of the day before, they all went on their way. We were, of course, in no immediate danger and help from a large steamer would not, as a matter of fact, have been of much use to us, even if offered, as they would almost certainly have wanted us to abandon ship, which we would naturally not have been prepared to do. We were, however, getting rather less happy about our position as we had counted either on meeting a steam trawler or on the weather moderating before this. All the time, too, we were slowly driving down on a lee shore at an uncertain speed, and casts of the lead showed that we had already lost some 26 miles.

To slow up our drift, the anchor cable had been shackled to the end of the warp and the full sixty fathoms veered but, as something plainly had to be done if the gale continued, the skipper decided to anchor, as even if the cable held for a few hours only, it would help us a lot. The chain was therefore hove in on the steam capstan and unshackled from the warp, which was again made fast to the stump of the mast. We then shackled on the anchor and let go. For about a minute the anchor could be felt dragging hard; then the chain came bar taut for a second with a violent jerk, only to slacken again immediately as it parted. This did not surprise us as, though the cable was up to Lloyds' requirements, these hardly provide for anchoring in the open in a gale of wind, with about a knot of way on the vessel.

Towards evening we were immensely cheered to see the sail of another Lowestoft smack not far off, bearing down on us under close reefs. She came close under our stern, a wonderful sight in the heavy sea, though this was rather spoilt for us by her taking a violent sheer to windward at the critical moment, so that for a second it looked as though she were going to ram us. This was just averted by a hand jumping to the tiller and helping her skipper to pull it hard up. As she surged by, they shouted that they would stand by us, ready to tow as soon as the weather moderated.

There was still no move in the glass and it was blowing harder than ever, but the occasional sight of the port or starboard lights of the *Sunny Isles* during the night made us feel that things were on the mend.

At dawn there was far less wind, barely gale force, in fact, but there was an odd green look in the sky to the Northwest and the glass began to rise slightly for the first time. The *Sunny Isles* was lying close astern, her skipper evidently mistrusting the weather and thinking it early to start towing. After a look 'round, we all went below to breakfast as there was nothing to be done.

The glass was now starting to rise fast. Towards the end of the meal a sudden screaming gust struck the ship. This was so strong that we felt her heel over, mastless as she was. This terrific puff was followed by an instant's lull, but as we sprang up to go on deck the full force of the storm broke. I suppose that the noise that even the strongest wind can make is limited, but this sudden unsuspected onslaught, combined with a violent trembling of the ship, produced a moral effect which I can liken only to the opening of an artillery barrage. From the companion ladder the mizzenmast could be seen waving like a tree in a high wind and it was obviously only a question of minutes before that would follow the main over the side. A trawler carries a large tackle leading from the mizzen head, and we scrambled on deck to make the lower block of this fast to an eyebolt amidships. On deck it was possible to move about only on hands and knees and the sight which met our eyes was an amazing one. The sea itself had been knocked comparatively flat, the tops having been blown off the waves, so that it was hardly possible to see more than the length of the ship for the driving spindrift. Overhead the livid green sky was clear except for a few low-driving black clouds.

The tackle having been secured with difficulty and set up, we retired again to the companion and hoped that the warp would hold. We consoled ourselves with the thought that such a hurricane could not last, while for the moment, at any rate, we were certainly better off than the *Sunny Isles*, which must have been caught with sails set. Though the first blast definitely smoothed the sea, this happy state of affairs did not last long and we were soon, for the first time, taking really heavy water on board. It was not long before she took a sea that broke the small boat adrift and stove it against the towing post, and this was followed by others which shook the ship to her keel. But the only really serious worry was the warp as, should this go, as it might at any moment if the trawl met an obstruction on the bottom, we had obviously no hope.

It was by no means pleasant sitting below with nothing to do but smoke and hope for the best, but all things have an end at last and, after a little added frightfulness in the shape of a violent thunder storm, about 1:00 P.M. the wind eased away to the force of a normal fresh gale. The relief was indescribable and what would ordinarily have seemed bad enough weather appeared no more than a fine summer breeze. The *Sunny Isles* was nowhere in sight and we felt anxious about her, though, as we afterwards heard, she got home with no damage beyond the loss of her mainsail. The Maas lightvessel, however, was only two or three miles astern, so we had evidently lost a lot of ground. A sail was also in sight some distance inshore.

Sighting the Maas, though bad in one way, as it showed that the lee shore was getting close, gave us a

definite fix and so a good chance of slipping the trawl and running into the Hook of Holland if things got desperate. This would, however, be a tricky business under mizzen alone, and it was decided to attempt it only as a last resort. The sail inshore was soon made out to be one of the big Dutch herring boats coming our way and in an hour or so she was close alongside. She had an enormous crew, fourteen or fifteen of them, ranging from old men with long, gray beards to quite small boys. They all lined up along the bulwarks and gave us three cheers, which was encouraging, and then ran off towards the land, evidently to get assistance. The Dutchman had a head sail set abaft the mast instead of her mainsail, having probably lost this in the breeze, and evidently thought he would not be able to manage to tow us himself.

Towards evening the smoke of a steamer appeared beyond the Maas and soon the vessel herself could be made out. She turned out to be a large pilot boat. Coming up close by our starboard side, she dropped a life buoy, with line attached, when about abeam, then turned across our bow and stopped so that the line drifted down to us. This we picked up and with it hauled across a bigger rope to which a heavy wire was made fast. The pilot boat kept her station on our bow with splendid seamanship, but even so the seas drove the two ships apart every few minutes, each time the five of us clinging to the rope being pulled the full length of the deck. I don't think I shall forget that pull as long as I live. The wire made fast, the next thing was to get the trawl, the pilot steamer meanwhile hooting her impatience on her whistle, for she was evidently impatient to get back to her station. Hauling with the steam capstan did not take long; in the cod end was a whitish mass which had once been fish. The pilot then turned for port and made off at full speed.

About ten knots is the most that a smack can do and we were now being towed at nearer twelve. The bows rose up and the stern squatted, pulling a great wave. Steering became a nightmare, for the tow rope, though securely made fast round the mast, had not yet been led into the fairlead forward; the mizzen, sheeted in flat, did not help matters, either. After a hard struggle, the wire was frapped in to the stem and things became easier.

By this time it was dark and the harbor lights could be seen close ahead. We had been taken in tow none too soon, for the wind was rising again with driving hail storms. Our tug had her Morse light going, evidently to warn the harbor authorities of our arrival, and as soon as we were well into the harbor, sung out to us to cast off. She then turned straight around and steamed off to sea again. A small tug made fast alongside and moored us in a basin on the north side of the river, her crew promising to send someone around in the morning to buy the few fish we had. This was an important matter as, not expecting to make a strange port, we had only a few shillings between us and, as far as could be seen, no means of getting more, while the stores and tobacco were running low.

It was still early in the evening and a drink was obviously indicated, so as soon as we were moored, we all trooped up to a small *estaminet* in the village about a quarter of an hour's walk away and got some good hot rum. There were several men from local vessels there when we arrived and, as they had probably heard that we had just been towed in disabled, we caused a certain amount of comment. This, I am sure, was of the friendliest description but, after a drink or two, our third hand, who was very insular and mistrusted all foreigners, began to take offence. He was persuaded, however, to overlook the matter and got safely back on board, where he became cheerful and finally turned in.

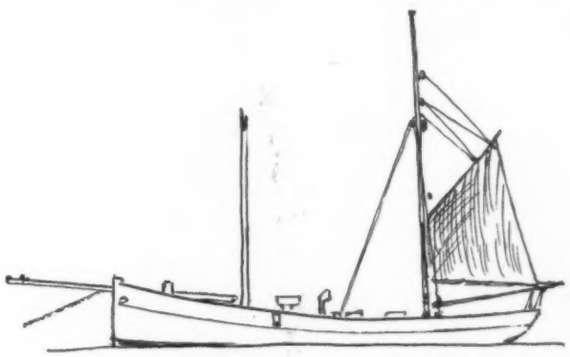
Next morning the cold was positively arctic and it was blowing hard from the Northeast. We were able to see our surroundings for the first time and found them rather depressing. We were the only occupant of the basin except for a few laid up fishing boats and a couple of small tugs, and the small village which we had visited the night before was the only break in the monotony of the flat, bare landscape. Close to this was a quay, at which the Harwich mailboat lay moored, and a small station.

During the morning a man with a hand barrow came and bought the fish. The cook and I gave him a hand with them to his cart and were rewarded with a small tip. This put us in funds for the time being but, after laying in food and coal and sending cables home and to the underwriters there was not much left.

The skipper of the mailboat called on us later during his afternoon walk. His run was a night one and he slept in the morning. He was kind enough to ask us on board for a much needed bath and afterwards showed us over the ship. He was justly proud of her and, while taking us around the first class saloon, told us that the passengers hardly knew that they were at sea. Having heard the story from the other side, I thought him optimistic.

Next day our skipper and I traveled up to Rotterdam by train to see the British consul and try to raise more funds. We arrived with only the equivalent of a shilling in hand and spent this on a shave, as I hoped to be able to get a check cashed and thought it a good investment. Shaving is not usual in a trawler at sea, so my appearance was not calculated to inspire trust.

(*Continued on page 100*)

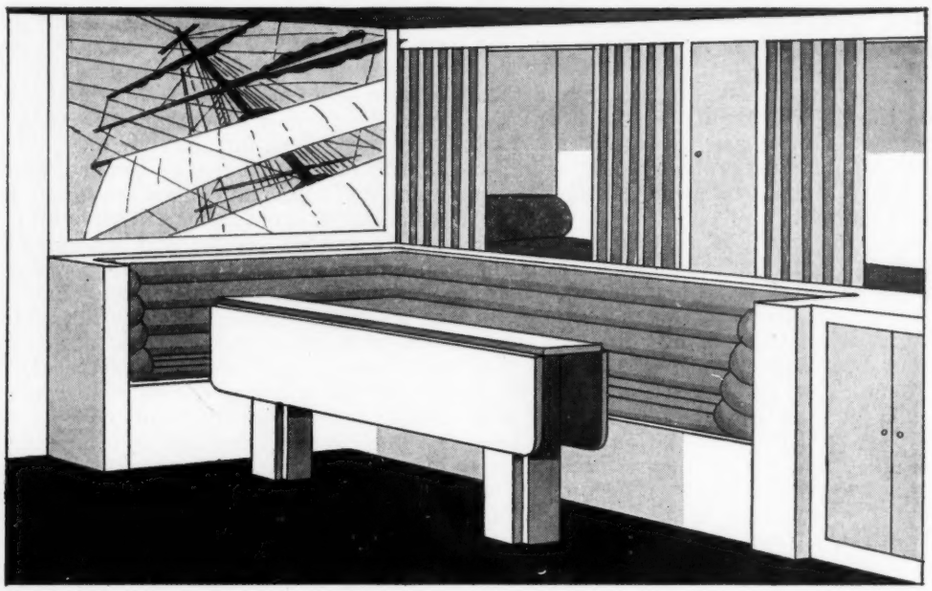


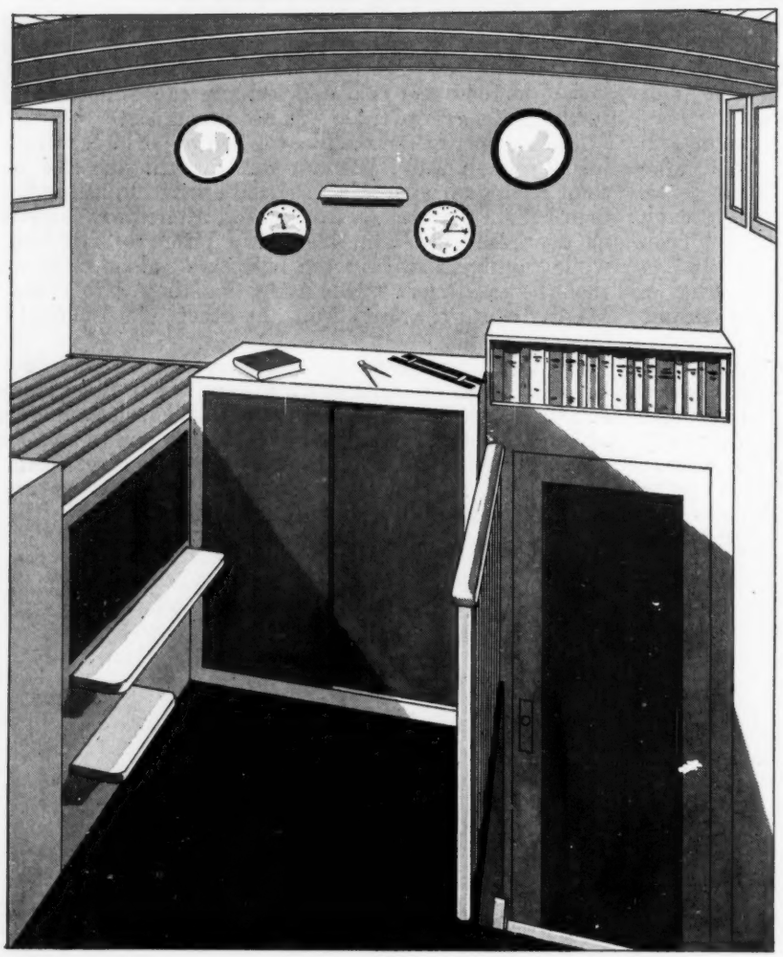
After the blow, when the reefed mizzen was the only sail left

Going Modern

VII—Redesigning the Interior of an 80-Foot Schooner

By LOU BLOCK





A decorative note of interest is obtained by use of a photomural over the settee in a corner of the saloon

Left. Enhancing the practical aspects of the deckhouse

IN SAILING craft, the traditional treatment of space below has always exemplified the wisdom of functional designing. The entire history of marine architecture is a record of the successful handling of limited space, and in its achievements can be found precedents for practically all of the methods employed by modern designers in other fields. Maritime design, regarded abstractly, has suffered the least from the grotesque influences of changing modes, and has been consistently beautiful in all its phases. This is undoubtedly due to the unvarying requirements for seaworthiness, and the enforced economical use of space. From the commercial and naval craft of every era, designed with the strictest utility always in mind, have come some of our best traditions of marine architecture.

In redesigning the cabins of the 80-foot schooner shown here, there is no departure from the conventional layout. Designed for extensive cruising, her spacious cabins, as planned by the

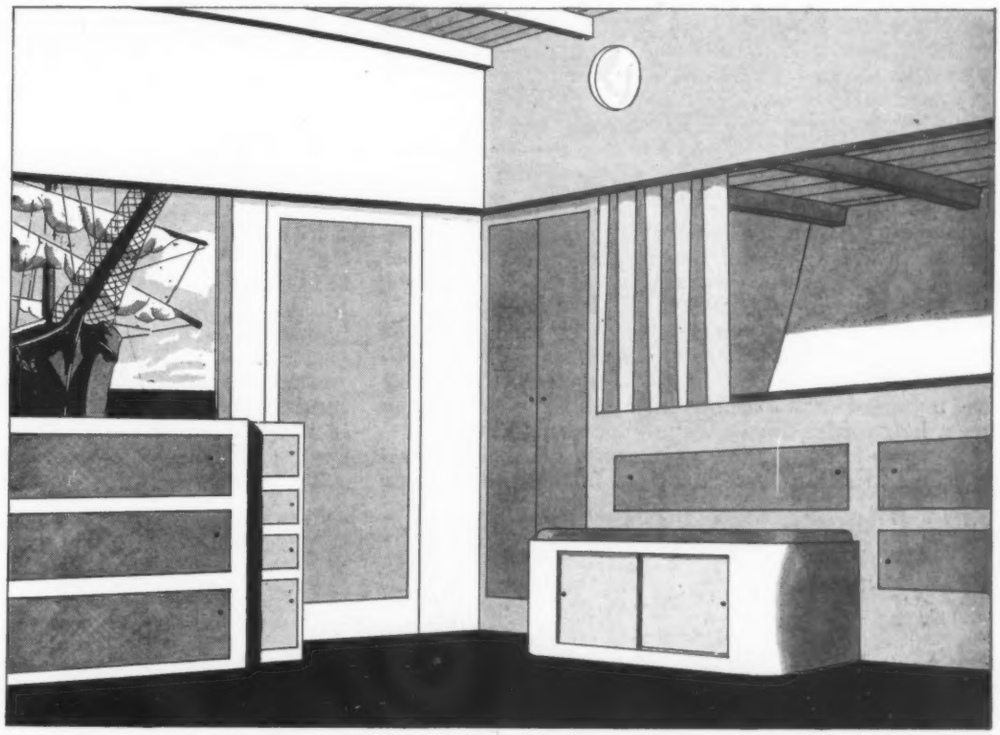
architect, adhere to the traditional use of space below. The intention of the suggestions contained in the drawings is further to simplify the elements in the construction, rendering them more functional and enhancing the appearance of the cabins. They also illustrate the possibilities for economy in a planned scheme of decoration.

The deckhouse just forward of the wheel should prove a convenience of inestimable value on a cruise. A chart table with space below for instruments, and a seat long enough to be used as a berth are handily arranged. Below the seat is a locker with sliding doors for stowing charts, and on the side a footrest. The steps lead down to the owner's cabin, and over the door is a shelf containing books pertaining to navigation. Painted white and gray throughout, with gray denim upholstery on the seat, this chart room is crisp looking and practical.

In the owner's stateroom a scheme of blue and white is indicated. The door panels and drawers are blue, and white paint is used everywhere else. The berths, curtains and settees are upholstered in blue denim. Abaft the berths are spacious lockers for clothes. The decoration is further enhanced by a photomural over the bureau. This type of pictorial decoration is proving a valuable adjunct to modern designing ashore. Greatly enlarged photographs of subjects suitable to the pattern of the room are often more fitting than painted murals. Detailed studies of rigging, wisely selected, have an extraordinarily pictorial value, and when used as shown here do much to beautify a cabin.

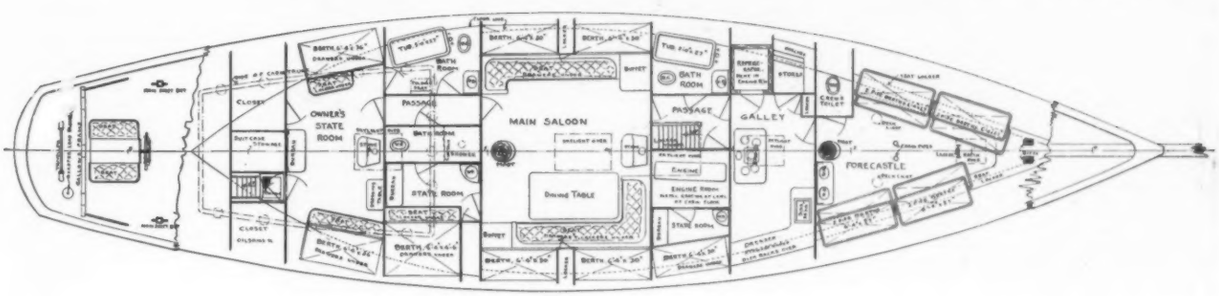
In the saloon the berths are flanked by generous sized settees. Fluted upholstery in blue denim makes an attractive covering, and blue denim curtains and covers are used for the berths. A photomural over the settee makes that corner of the saloon, which is most used, singularly decorative. Blue and white is the color pattern employed, as in the owner's stateroom.

The chief effectiveness of treating the cabins as indicated here, lies in the avoidance of crowding and needless embellishment. In a yacht of this size, with its accommodations for a large afterguard and crew, a successful voyage is dependent on the comfort of those on board. It seems a needless fact to stress but it remains true, nevertheless, that the comforts of a cruise should approximate, as far as possible, those enjoyed ashore. As suggested in an earlier article, the man on deck is no less a seaman if his cabins below reflect a softer inclination.



Blue and white are effectively used in decorating the owner's stateroom. The impression, here, is one of spaciousness

Below. The interior arrangement of the 80-foot schooner designed by S. S. Breese



"Guadalhorce" was an old-timer, dating from 1867

The Last of the "Guadalhorce"

Some Notes on a Picturesque Spanish Bark

By J. ALEXANDER NOBLE

ASIDE from the element of tragedy involved in the event itself, the loss of every sailing vessel carries with it a sense of that finality which marks the passing of an era. Such was the loss of the Spanish bark *Guadalhorce*, off the coast of Cuba, last summer.

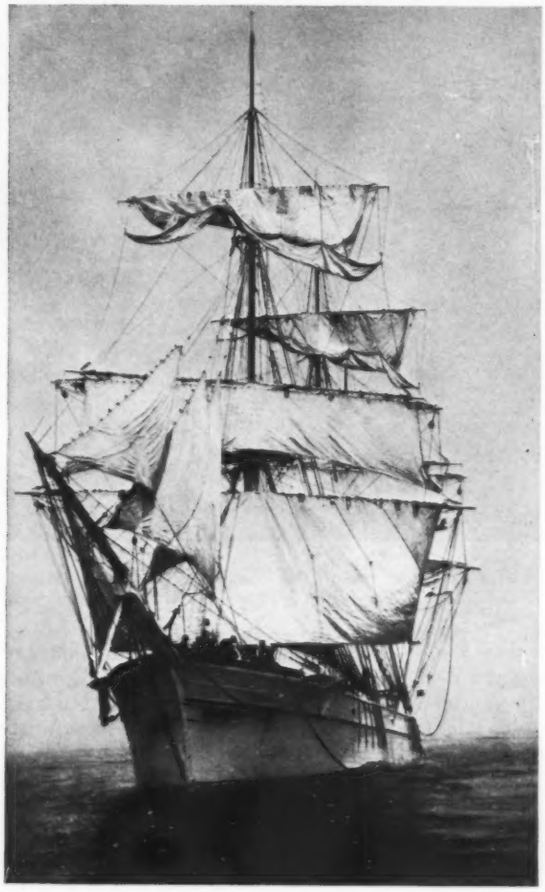
As a small survivor in the once great Canary Island commerce, the Spanish bark *Guadalhorce* ran case oil from New York for almost two decades. In all that time she managed to attract but little attention. Like living men, living ships have a way of going unnoticed.

She was built in 1867 at Majorca for the Mediterranean and African trade, and, as in the case of many small vessels, her builders have long been forgotten. Under the various names of *Anibal* (1867–1908), *Principe D'Asturias* (1908–1911), and finally *Guadalhorce* 1913 (?)–1933), she has been owned successively in Malaga, Seville, Vigo, and Las Palmas. In 1921, she was purchased by Bosch y Sintes, of Las Palmas, who, for years, have owned a small fleet of vessels — the *Guiniguada*, and two other brigantines, a polacre, and a three-masted schooner, the *San Antonio*, originally, strangely enough, the *E. B. Darling*, built in 1876 at Port Jefferson for the American coasting trade.

The *Guadalhorce*, having the small gross tonnage of

The crew take up on the bow line as the bark ranges up alongside the pier. The port anchor is probably a comparatively recent acquisition, as it is all iron, while the one on the starboard bow has the old-fashioned wooden stock

310, carried about 15,000 cases of oil, a few sewing machines and, now and then, two automobiles on deck. As a matter of fact, this is only fifty per cent more than is carried by the average harbor barge. But size does not make the vessel. A small coaster often has a certain lightness or prettiness never attained by larger craft, no matter how beautifully built they may be. In spite of her full, flaring bows, she had not one note of heaviness about her — which is more than one can say of most of the twentieth century square-riggers.



Many of the square-riggers of today are famous more by virtue of their survival than of any outstanding quality of design. But I believe that this wooden bark of 120 feet, with her semi-elliptical stern and well-shaped transom, trimmed off with carved rope, could be judged on her own merits. To the very end, this copper-bottomed bark was a profitable commercial enterprise purely. There were no paying cadets and, above all, she was never used for advertising purposes, though at one time an oil company wanted to paint the name of their product on her sides. Fortunately, this idea never materialized.

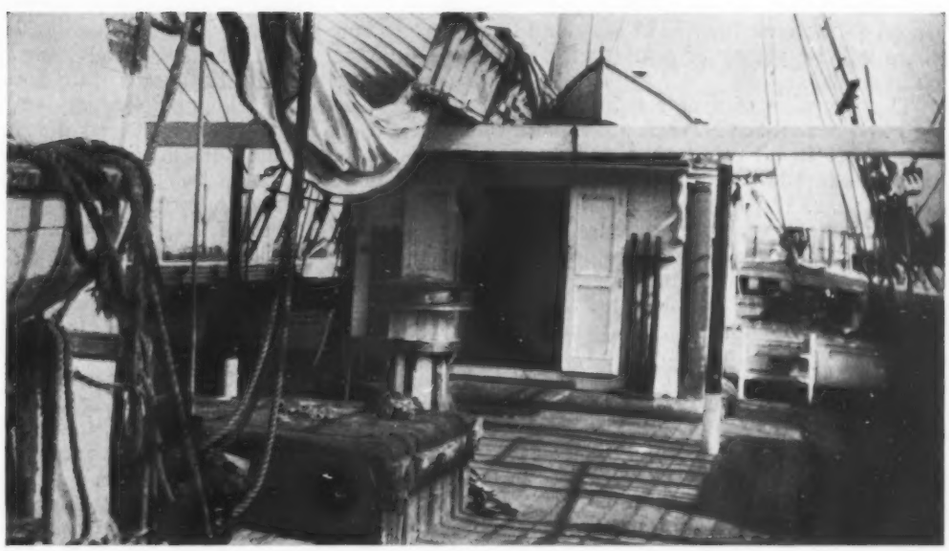
Up to 1923, after a passage of some thirty to sixty days, she would be seen unloading her 100-ton sand ballast at the 79th Street pier, North River. Those were the days of the fashionable and popular Captain Cortez when the perfumed cabin was hung with laces and bright gingerbread work. Later, when the *Guadalhorce* discharged her ballast at the Bayonne oil docks, she was almost entirely forgotten.

In 1930 the command was assumed by the first mate, Garreton, who, contrary to the present tendency on dying vessels, kept his bark looking like a yacht. In truth, she was always as clean as her crew was otherwise. It was during this period that she again made herself noticed by entering New York flying the wrong flag after the political upheaval in Spain.

Last summer, while on her way from Las Palmas to Jacksonville for lumber, after sixty-seven years of service almost devoid of serious casualties, she foundered off the Cuban coast in a hurricane. She carried down with her Captain Garreton, two mates, a boatswain, five seamen, two ordinary seamen, a cook and messboy.

The little white *Guadalhorce*, with all her carved beam-end dragons and wood stock anchor, was probably not only the last bark to enter New York Harbor, but also the last profitably run square-rigger seen on the East Coast. On July 20th, 1932, she sailed by Scotland Light for the last time, flying that huge flag which, as in the old brigs, was almost as large as the spanker. Several years ago, the brigantine *Guiniguada* of the Bosch y Sintes fleet, loaded case oil in New York Harbor. She, too, was the last of her rig to enter the Narrows.

Bosch y Sintes own but one vessel now, an old iron steamer also named — ironically enough — the *Guiniguada.*



Just after the tug made fast to the bark, with the bight of the tow line dragging in the water

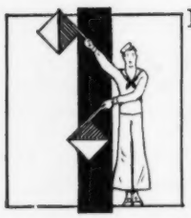
Looking aft on the main deck. Notice the break of the poop, and the capstan bars stowed in racks on each side of the cabin door

Bang!

Goes The Starter's Gun

By

GEORGE W. SUTTON, JR.



IN THE sport of motor boating all is peace, harmony and brotherly love. Motor boat racing, for 1934, is off to a magnificent start, both here and abroad. The biggest year the sport ever enjoyed in this country was 1927. Already there is evidence that the current season will see at least twice as many sanctioned American regattas as took place seven years ago and the number of events which will be run without benefit of sanctions will eclipse all records.

The sport is in healthy condition, indeed. As Prosperity lifts her wan face from the pillow, she is beginning to spend money. A lot of people will have racing boats this year who never had them before, and still others will be seen on the courses whose only racing for three or four years has been with the sheriff. The American Power Boat Association and the National Outboard Association are working in the closest possible alliance, through their joint organization, the National Outboard Racing Commission. There will be a greater number of outboard racing drivers within sight — and, more aptly, sound — than we have ever seen or heard before. And there will be plenty of activity for the larger inboard classes, too.

The adoption of a new point scoring system by the A. P. B. A. and the N. O. A., to replace the system used since 1924 in all our racing and practically all racing throughout the world, is an important development of the year. It will no longer be possible, thanks to the genius of Commodore James S. Y. Tyson, head of the A. P. B. A. Handicap Committee, for a man with the tiniest Class A outfit to finish last in all races and win the country's greatest trophies and the scoring championship of the United States. In the new system, 400 points are still given for first place in a heat, but the allowances for other positions have been reduced so that heat winners will hereafter be more adequately rewarded for their efforts. The Gold Cup, President's Cup, Interstate Trophy for 125's and a few others covered by specific deeds of gift will be run under the old A. P. B. A. scoring system. And, to cap the climax, this bard expects to develop twice the usual number of headaches in keeping

Keystone View Co.

Miss Loretta Turnbull, of Monrovia, California, at the wheel of "Sunkist XI," her eleventh racing craft

the scores of all outboard drivers in the country, a necessary detail in connection with the determination of the contests for the American Outboard High Point Trophy (the George H. Townsend medal) for all drivers in all sanctioned regattas, and the Colonel Green Round Hill Trophy for amateur outboard drivers participating in sanctioned A. P. B. A. regattas.

As a result of the wonderfully successful international regattas in Florida, fathered by President George H. Townsend, of the A. P. B. A., a rash of new international racing organizations has broken out and something may come of some of them. Jean Dupuy, the energetic young Parisian publisher who gave our boys such a battle in the Class X outboards in Florida, is the animating genius of the International Outboard Association which plans to hold an annual series of international outboard events, winding up each season with a world championship regatta. It is Mr. Dupuy's sensible idea to have two I. O. A. directors in each country and to make the organization practically the outboard department of the International Motor Yachting Union.

Quite a different set of plans is proposed by Count Max Pulaski, who has apparently retained all of the enthusiasm and energy displayed by his ancestor, Count Casimir Pulaski, in leading George Washington's cavalry. Count Max is largely interested in the holding of motor boat races at Cannes, in Southern France. The waters there, however, are those of the open Mediterranean and, at times, grow very robust and unfit for little outboard boats and dainty inboard runabouts. Therefore, William F. Crosby, head of the A. P. B. A. Runabout Contest Board, has drawn up a tentative set

(*Continued on page 110*)

The record broadbill caught by Mrs. O. C. Grinnell last summer off Long Island. The "Oligrin," specially designed for offshore fishing, is shown in the insert

Sport Fishing For Summer Yachtsmen

By JOHN MAHONY

NY yachtsman whose home port lies between Key West and Nova Scotia, and whose boat is suitable for offshore cruising, has easy access to a brand of big game fishing that is as fine as can be found anywhere in the world. Even the extremist, who wants to go the whole works in "busting" records, will find plenty to shoot at, for the reason that the tackle has not yet been designed that will hold the really big boys to be found in these waters.

But that is another story. This yarn is intended more for the yachtsman who is casually interested in offshore fishing, rather than for the forthright fisherman. At the outset, he who fishes casually is advised most strongly not to mess with big fish. He will find all the sport he wants, with thrills, exercise and anguish aplenty, if he limits himself to the so-called smaller fry of 50 to 100 pounds. Incidentally, have you ever tried to "pump" a 50-pound tuna? Not a 500-pounder, merely a 50-pounder? If not, you have a surprise in store. This sport fishing may be done without necessitating a change of importance in your boat.

The questions arise as to what fish are available, when and where they are to be found, and what sort of fishing tackle is necessary to take them. Interesting as is the history of offshore sport fishing in this country, the limitations of space permit only a brief outline of its development. At one time — and not so very long ago — the best minds in the big game fishing fraternity believed that Florida waters held a monopoly on the sport. Probably it did, and still does, in so far as year 'round sport, abundance and variety of species are concerned, with its sailfish, marlin, occasional broadbills, tarpon, tuna, barracuda, wahoo, bonito and many others. Then California challenged with its larger sailfish and famous tuna. Still later, Galapagos, the Canal Zone, the North Sea off Yorkshire, and New Zealand took the spotlight, in turn, with their respective whoppers. All of these localities were enchanted spots, as far as the Eastern yachtsman-angler was concerned and, to him, mere distance certainly added enchantment to the view.

In the meantime, those kings of ocean sport fish, broadbills and tuna, of enormous size, had been taken commercially for years, by harpooning, between New Jersey and Nova Scotia. In the early 1920's, the late Oliver C. Grinnell, New York sportsman, began experiments, based on his belief that these fish could be caught with rod and reel in the vicinity of New York. The results, now well known, showed that they were available during the height of the East Coast yachting season, and within a couple of hours of most Northeast Coast towns. Mr. Grinnell was the first to land a broadbill with rod and reel on the Atlantic Coast. This was in 1927, about ten miles southeast of Montauk. Mrs. Grinnell — his inseparable companion, and an outstanding sportswoman in her own right — soon followed suit. She was not only the first woman to conquer a broadbill, but later hooked the largest specimen caught by a

woman. In the summer of 1933, Francis Lowe, Yale oarsman, fishing some ten miles south-southeast of Rockaway, landed a tuna of 705 pounds, thereby setting the present American record with rod and reel. More really big fish have been taken between Scotland Light and Nova Scotia than in all the rest of the world put together.

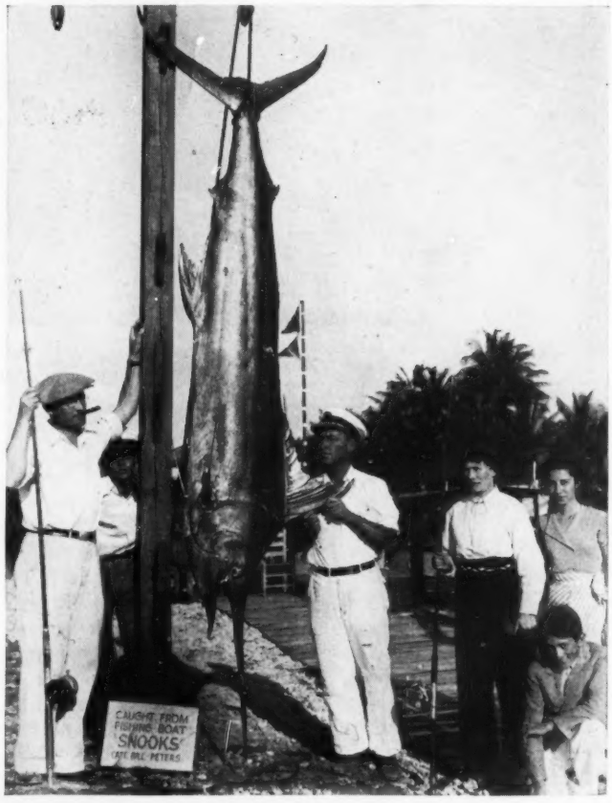
Though broadbills and tuna are the outstanding spectacular big game ocean fish available to the East Coast yachtsman, it should not be thought that these two alone comprise his prospective quarry. For the guidance of those who may be interested, the following table is submitted. It is a partial list of species which (with the exception of weakfish) may be considered as the game ocean fish of the Atlantic Coast in summer.

SPECIES	JUNE	JULY	AUGUST	SEPTEMBER
	(Figures in parenthesis are average date of first appearance)			
BROADBILLS	Fire Is. (10) Montauk (20) Block Is. (28)	Cox Ledge (1) NoMans Land (10) Maine (12)	Nova Scotia	Disappear
TUNA	Lower Jersey	Upper Jersey Long Island (15)	Long Island Block Is. (1–25)	Block Is. to Nova Scotia
MARLIN	Uncertain but probably from So. Car. to Cape May		Montauk	Disappear but probably head for Nova Scotia
MACKEREL	Jersey to Block Is.	Block Is. to Maine	Maine to Nova Scotia	
STRIPED BASS	Jersey to Block Is.	Jersey to Block Is.	Jersey to Block Is.	
WEAKFISH	(Long Island Sound, especially Peconic Bay)			
BLUEFISH	Jersey Shore	Jersey to So. Long Is.	Jersey to So. Long Is.	So. Long Is. Shore
DOLPHIN	Probably N. C. to N. J.	N. J.	Montauk	Montauk
BONITO	N. C. to N. J.	N. J. to Block Is.	N. J. to Block Is.	

As to the type of tackle necessary, every angler has his own theories. The suggested list which follows is made with the thought that the reader may not be an experienced fisherman; however, the items listed in the column headed "Recommended for General Use," are those I would furnish a guest of mine for his first season, so as to give him maximum sport with minimum chance of breakage. Somewhat sturdier than the "6/9" standard club specifications, this is a serviceable, sporty outfit and, with ordinary care, rod and reel will last a lifetime. It will afford plenty of action with fish weighing between 40 and 75 pounds, and will, in the hands of an experienced angler, take fish of 100 pounds and upwards, without particular danger to the equipment.

ITEM		RECOMMENDED FOR GENERAL USE	STANDARD "LIGHT"	"SUPER HEAVY"
ROD — Butt	— Length	18–20 in.	18 in.	20–22 in.
Tip	— Length	5 ft. 6 in.	5 ft.	5 ft. 6 in.
	— Weight	9–10 oz.	6 oz.	18–22 oz.
	Wood	Split Bamboo	Split Bamboo	Split Bamboo Hickory
REEL	Size	6/0	4/0	
	Make	Atlapac vom Hofe Templar-400	Atlapac vom Hofe Templar-300 "Capital"	Knowles 20/0 vom Hofe 12/0 Balboa 12/0
LINE	Size	18-thread	9-thread	72-thread
	Length	300 yds.	400–500 yds.	1000 yds.
HOOKS		8/0 O'Shaughnessy 7/0 Sobey	7/0 O'Shaughnessy 7/0 Sobey	14/0 Grinnell 14/0 or Sobey
LEADERS	Kind	Piano Wire	Piano Wire	Wire Cable
	Gauge	8 ga.	7–8 ga.	
	Length	10 ft.	10 ft.	18 ft.

(Continued on page 120)



A record catch for Atlantic coastal waters. This black marlin, weighing 325 pounds, was taken off Miami by Mrs. W. D. Loy

Familiar to the Florida fisherman are the sailfish and the dolphin. Sailfish are rarely taken north of Cape Hatteras, but large schools of big dolphin are not uncommon off the Jersey and Long Island coasts during the summer

Under the Lee of the Longboat

by Cap Stan

THE first three international team matches of the season in which this country was interested didn't turn out any too well for the U. S. A. I am referring to the three matches sailed in Bermudian waters in April and May. First, the Sound Interclubs took it on the chin from the Bermuda One-Designs in four straight losses in what the press described as "an utter rout." The little Class A Frostbite dinghies retrieved Yankee honors by winning three out of four team matches against four Bermudian dinks. But then three of our Six-Metre boats went down and took a sound trouncing from three Bermudian "Sixes" in a series of four races for the Prince of Wales Trophy. Not so good, especially when we consider the fact that one of our "Sixes" was none other than the famous internationalist, *Lucie*, and that another was the former Sound champion, *Anis*, ex-*Totem*, and that the third was *Jack*, designed especially with the view of making the American team which will race against the British Six-Metres in September for the new British-American Trophy. *Lucie* put up a good scrap, but *Anis* and *Jack* were trailers. Of course, the latter boat is brand new and untried, and will undoubtedly "get going" before long. A dozen or so "Sixes" will be out this summer, and the competition promises to be mighty keen.

+ + +

Keep your eye on these Bermudian racing skippers. Eldon and Kenneth Trimingham have always been tough birds to beat. But along come a couple more pretty nearly as good — chaps like Jim Pearman, Bayard Dill, Teddy Gosling, Roddy Williams, and others — comparatively unknown a few years ago, but well able to hold their own in the fastest company today. And watch the juniors. They grow up with a main sheet in one hand and a tiller in the other, and are carefully coached by their elders as they hammer around in their little jib-and-mainsail dinghies, learning racing tactics, helmsmanship, rules and seamanship in general. The coming generation in Bermuda will make its mark, or I miss my guess.

+ + +

The trial races for the three American aspirants for the defense of the America's Cup should be every bit as interesting as those held four years ago. *Yankee* and *Weetamoe* have both been altered extensively, both in hull and rig, and should be much slipperier than in 1930. *Rainbow* should certainly have a lot of go in her. We'll need a fast boat this year if reports of *Endeavour's* speed are not grossly exaggerated. However, I still have hopes of winning that hat from the gentleman in Erie, who believes Tom Sopwith will take the mug back to England with him next September.

+ + +

One point which may very possibly have a bearing on the outcome of the America's Cup match, and which is generally overlooked, is the fact that the American skippers are quite at home when it comes to getting the speed out of a boat in lumpy, broken water, such as is found off Newport. In general, the Britishers are not. Most races in England are sailed in protected, or semi-protected, waters. There is a whale of a difference, Mates. Long Island Sound skippers generally take a beating when they go to Marblehead — they're not used to the heave and scend of the sea. Seniors and Juniors both. The last *Shamrock* didn't like Newport conditions, nor did her skipper, if you ask me. *Endeavour* is a different boat, and will undoubtedly be far better than *Shamrock* in open water. But how about her skipper — and his sail trimmers? It's just a hunch, perhaps, but I have an idea that the American defender, sailed all summer off Newport, will be better handled than the challenger. Maybe that feature alone will tell the story late in September.

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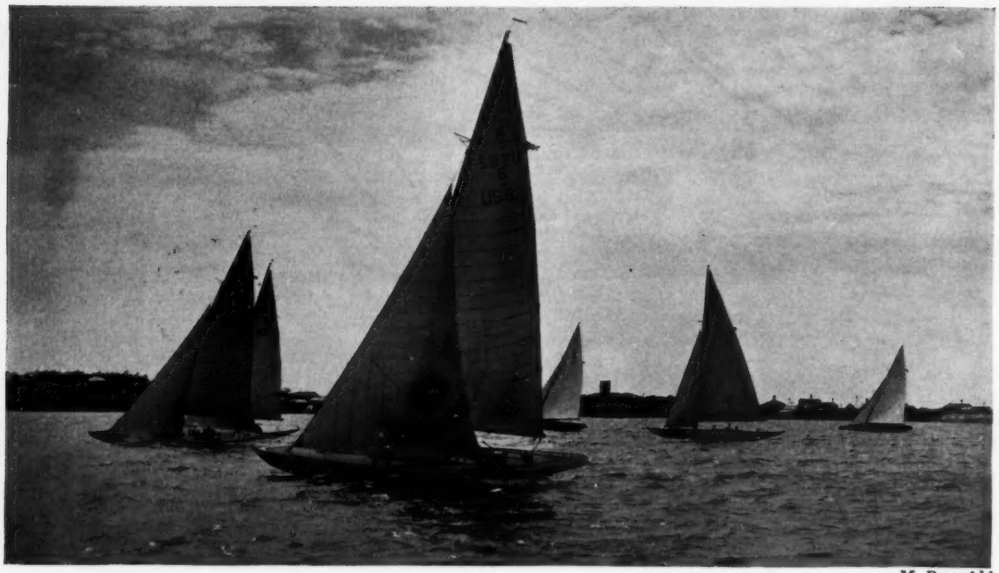
Some months ago I made some remarks anent motor sailers, since which time various gentlemen have more or less taken me to task and shed a lot of light on the question of what a motor sailer is and what it is not, and what a real motor sailer should be. While I'm not taking sides at present, it seems as though Gordon Munro advances some pretty sound arguments in favor of certain types of craft, which will do this and that and the other thing better than most ordinary types of auxiliary. Go to it, boys.



M. Rosenfeld

The "Sixes" head for the starting line. "Jack," J. S. Johnson's new racer, is in the foreground

"Achilles" Wins Prince of Wales Trophy

ACHILLES, the smart Six-Metre yacht owned and sailed by James E. Pearman, Rear Commodore of the Royal Bermuda Yacht Club, triumphed in a series of races held in Bermuda for Six-Metre yachts, thus winning the handsome trophy sponsored by the Prince of Wales. Three American Six-Metres journeyed to the Land of the Lily in an effort to win the coveted prize, but three Bermudian "Sixes" met the onslaught of the Yankee craft and succeeded handsomely in giving the visitors a sound trouncing in the four races sailed early in May.

Besides Pearman's *Achilles*, Bermuda came to the line with two sister ships, Eldon and Kenneth Trimingham's *Viking* and *Sea Venture*, the latter piloted by Lloyd Jones. The American craft were Briggs Cunningham's famous internationalist, *Lucie*, *Anis*, ex-*Totem*, now owned and sailed by Clarence Smith, and *Jack*, a new craft designed by Sparkman & Stephens for J. Seward Johnson. *Lucie* annexed third place in the series, while *Jack* and *Anis* trailed far in the rear.

Bermuda made a clean sweep in the first race, held on May 7th, Eldon Trimingham, Bermuda's ace skipper, piloting *Viking* home a winner, followed closely by *Achilles* and *Sea Venture*. *Lucie* managed to come in fourth, followed by *Jack* and *Anis*.

Commodore Pearman took the second affair in *Achilles*, and *Lucie* worked up to second place, with *Viking* a close third. *Sea Venture*, *Jack* and *Anis* followed in order, the latter two apparently being outclassed by both the Bermudians and *Lucie*.

Sea Venture crossed the finish line in first place in the third race, but was disqualified when it was found that she had lost a man overboard and had not stopped to pick him up. This gave *Viking* first honors and put her in the lead on points. *Lucie* and *Achilles* came home in second and third places, respectively, while *Jack* and *Anis* brought up the rear of the procession.

In the fourth and deciding contest, Pearman triumphed once more, *Lucie* again coming second, and *Sea Venture* third. Fourth place was the best that Trimingham could do with *Viking*, with *Anis* trailing and *Jack* not finishing.

Smart westerly breezes of 16 miles an hour or better made snappy racing in the first two affairs, while the weather was a bit lighter in the last two events. *Achilles* split her Genoa jib in the second event, but shifted to an intermediate and worked into a winning position. Several of the boats had trouble with their parachute spinnakers, but no casualties resulted.

The failure of *Jack* to make a better showing was undoubtedly due to the fact that she was fresh from the builder's yard and had never been under sail before the series started. When sails and rigging are properly stretched and the boat tuned up, she will no doubt be heard from in the Six-Metre Class in the United States.

Following is the point score of the series:

Achilles, J. E. Pearman (Ber.), 21½; *Viking*, Eldon Trimingham (Ber.), 19½; *Lucie*, Briggs Cunningham (U. S.), 18; *Sea Venture*, Lloyd Jones (Ber.), 11; *Jack*, J. S. Johnson (U. S.), 7; *Anis*, C. Smith (U. S.), 6.

M. Rosenfeld

James Pearman's "Achilles," winner of the series of races sailed between American and Bermudian "Sixes" in May

This Huckins "38" Offshore Model cruises at 20 miles an hour with a top speed over 25. Her two Sea Mate 90–100 h.p. Kermaths operate through the Huckins Silent Stern Drive

Amended Rule Allows Improved Model

UP TO the present time, there is no information as to the new "Sixes" which will probably make up the British team in the coming series of races in American waters, but, judging from an Eight-Metre yacht that Charles Nicholson has designed for Lord Foster and which is being built at Gosport, I think it may be inferred that a definite improvement in model may be looked for. This improvement is very pronounced in the Nicholson boat and is to be seen mainly in the forebody above water. There is now no tendency to pinch in the deck line in this region, as there was under the International Rule before it was altered last winter, and it is probable that even those who liked — or professed to like — this unsightly and inefficient distortion will be converted to an appreciation of the more natural form favored by the amended rule. It is to be regretted that, when such a drastic change was made in the method of measuring the forward end, no attempt should have been made to secure a better relative balance forward and aft. A change in this direction would, I feel certain, have found favor with American yachtsmen, as also would a change in the restrictions on the dimensions of spinnakers and probably also of Genoa jibs.

M. HECKSTALL-SMITH

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Boat Building Code Now in Effect

THE N.R.A. Code of Fair Competition for the boat building and boat repairing industry has at last been agreed upon, and was signed by the President on April 24th, and became effective May 4th.

While a general shipbuilders' code had been signed and was in operation last year, the yacht builders and owners of repair yards felt that conditions were so different in their particular branch of the industry that a separate code was essential. Such a code has now been drawn which meets with the general approval of those in the yacht building industry, and it is the hope of N.R.A. officials that it will prove of considerable benefit to the industry and to the men who work in it.

The code itself does not interfere with the right of any owner to do personally any work whatsoever on his boat, nor does it prohibit the regular crew of any boat or yacht from doing any work within the boat or above the rail. It does, however, bar the owner from employing outside help except through the agency of the yard where and while his vessel is hauled out or docked.

William Gardner

IN THE death of William Gardner last month American yachting lost one of its two great naval architects. He passed away at his home at Bay Head, N. J., on May 7th, at the age of 74, after an illness of nearly two years. For the last ten years Mr. Gardner has been inactive, due to failing eyesight, having retired from his firm, William Gardner and Company, in 1925.

His last large racing yacht was the beautiful *Vanitie*, designed in 1914 for Alexander Smith Cochrane as one of the two yachts built that year for the defense of the America's Cup. Although she was not chosen to defend when the race scheduled for that year was finally sailed in 1920, *Vanitie* was considered by many yachtsmen to have been as fast, if not faster, than *Resolute*. She suffered, however, in the early trials by lack of organization and

E. Levick

William Gardner, in his old office overlooking the harbor

too many changes in personnel to enable her to show the best there was in her. This year, after twenty years of service, *Vanitie* will be out as a "trial horse" against the newer cup yachts, being sailed by Gerard Lambert, her present owner, and in a light breeze it is doubtful if there is a faster yacht of her size afloat.

Perhaps Mr. Gardner's most famous yacht, his masterpiece, is the three-masted schooner *Atlantic*, built in 1903 for the late Wilson Marshall. She was (and still is) a beautiful vessel, and in the Transatlantic Race of 1905, under the command of Captain Charles Barr, she not only won the German Emperor's Cup, but set a record for the course from Sandy Hook to Bishop's Rock, of 11 days, 16 hours, 22 minutes.

William Gardner was born in Oswego, N. Y., and before he was fifteen he had made a voyage from San Francisco to New York around Cape Horn. He graduated from Cornell University, spent several years thereafter in a Delaware River shipyard acquiring a practical knowledge of shipbuilding, later went to the Royal Naval College, in England, and in 1888 returned to America, where he took up the practice of yacht designing.

From the start his racing yachts were successful and soon made a name for their designer. The 40-footers *Kathleen* and *Liris* were his first, and the former won nearly every race in her class for the first two years. In 1895 he designed *Norota* for that clever yachtsman, Frederick M. Hoyt, and two years later turned out for the same owner the cutter *Syce*, which proved almost unbeatable. There followed many others, the schooner *Quisetta*, the successful *Mira*, for Charles Lane Poor, the *Dorwina*, the *Irondequit*, the *Aspirant*, and others too numerous to mention here. *Aspirant*, sailed by Addison and Wilmer Hanan in all her races, lost but two races in her first two years.

With William Gardner in New York and Nathanael Greene Herreshoff in Bristol, American yachtsmen were privileged in having two designers of unusual genius and skill. In Mr. Gardner they had an artist as well. All of his creations had beauty as well as speed. He was content with nothing short of the best, and to him a yacht had to be as perfect as it was possible to make her. It will be hard to fill his place in the field of naval architecture.

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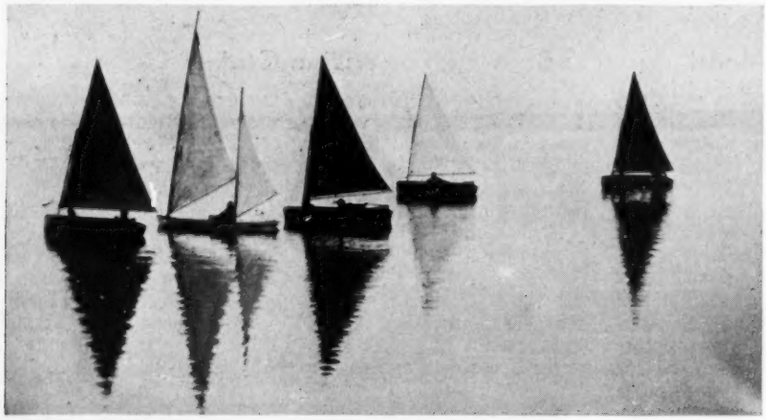
Frostbiting at Toledo

DESPITE the rigors of a northern winter, the junior members of the Toledo Yacht Club have been enjoying the thrills of dinghy racing the past few months. The fleet of eleven dinghies raced every Sunday up to Christmas, after which the season was ended by ice. During the enforced rest, a minstrel show and dances served to raise funds for buying prizes. Each boat received a placque stating her position in the series and each skipper and crew a sweater. Late in March, when the ice went out, the racing was resumed and the series concluded with an eleven-mile race.



The Toledo Yacht Club Frostbite sailors wound up their season on Christmas Day

Bottom, left. "Ni Ni Nie," a Pacific Coast One-Design. Manned by German naval officers, she defeated "Scamp," sailed by officers from the U. S. Navy

Below. The first of the "Bull Dogs," a new one-design class. She is 14′ o.a., 11′ 6″ l.w.l., 5′ 3½″ beam, 2′ 5″ draft, and carries 110 square feet of sail. The class was designed by Megargel & Gruber for use by juniors

M. Rosenfeld

E. Levick

L. M. Bailliere's cutter "Aweigh," designed by Sparkman & Stephens, Inc., goes for a spin off Solomon's Island

"Ochito" recently made a 44-day passage from Las Palmas to New York, manned by her owner and a Bermudian boy

"Ochito" Returns from Greece

ON THE 13th of April the 36-foot Friendship sloop (now ketch-rigged) *Ochito* arrived at Quarantine in New York Harbor at the end of a 44-day passage from the Canary Islands and two and a half years of cruising.

Since we reported Mr. and Mrs. Crowley's eastward passage across the Atlantic, they have been cruising about the Mediterranean for something more than a year.

The start home was made from Piraeus, the port of Athens, on the fourth of December, last winter. As Mrs. Crowley was not well enough to tackle a 6500-mile ocean passage in winter, she left by steamer. But there were three on board at the start, Skipper Crowley, George Weller, an American friend who "signed on" in Athens, and Cuddy, the Bermudian boy the Crowleys had picked up on the way over.

The passage to Naples, the first port of call, was the most difficult part of the trip home. That 700 miles took 22 uncomfortable days. Short, hard blows alternated with annoying calms and cross swells. It rained, hailed, or snowed every day but one. There was seldom wind enough to fill the sails, except from dead ahead. And it was all topped by a four-day snowy northerly between Messina and Naples that had them just "hanging on." It's not surprising that Weller decided to take a steamer home from Naples.

The 1000-mile run from Naples to Gibraltar, started on January fourth, also took 22 days. The weather was more or less a repetition of the Athens to Naples variety, except that the winds were somewhat harder and lasted somewhat longer, but were not from ahead, which accounted for the increased mileage. By laying a course well to the northward, *Ochito* was able to drop off and get a good slant when the wind, always from the north, would harden.

A parted anchor cable caused a close shave in missing the rocks in the Strait of Gibraltar, before they were cleared on February 10th.

The Atlantic passage was made by way of the usual sailing ship route through the Trades. A stop at Las Palmas in the Canary Islands was the only break on the way (just after a sandstorm almost 100 miles off the African coast).

Ochito cleared from Las Palmas on the evening of February 28th, bound direct for New York, with the alternative of stopping in the West Indies if the 4200-mile run seemed too long. The Trades blew fair and strong most of the time, giving them their westing easily under squares'l and square tops'l most of the way. After the Trades, the variables provided a week of mild, warm, slow but pleasant sailing before the Gulf Stream contributed its usual spicy bit as *Ochito* crossed it at Hatteras.

Coming north, *Ochito* stood in fairly close to the coast to be in the best position to use the expected westerlies. As a matter of fact, she got thick and threatening easterly weather, but mostly good sailing, all the way up to the Jersey coast before the westerlies materialized and carried her up to Sandy Hook, which appeared 200 yards abeam at dawn on the 44th day out. This was the first land sighted since leaving the Canaries, although the official "landfall" had been the light of Winter Quarter Shoal Lightship three nights earlier.

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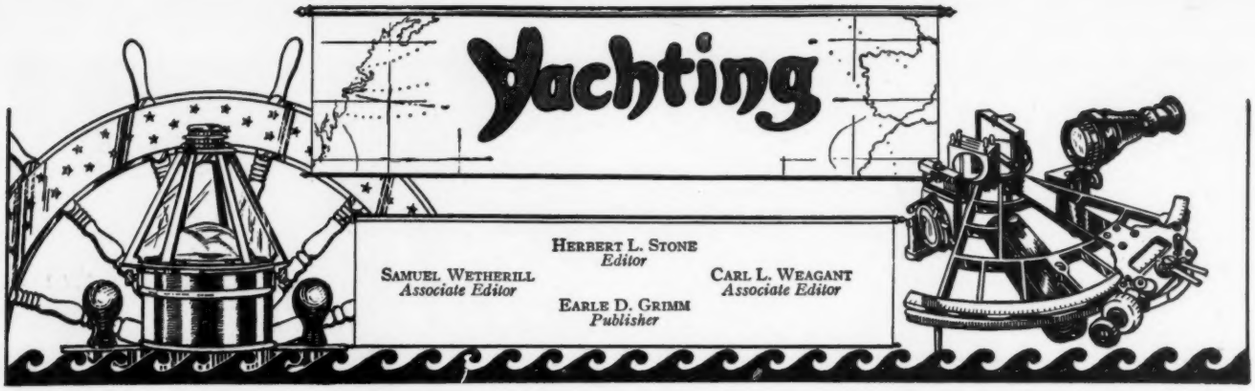
German Officers Win Informal Match Race

ANYONE who doubts the yachting ability of German naval officers should have a look in the wardroom of the cruiser *Karlsruhe*, where they will find a neat little silver cup, won from a crew of American officers in San Diego early in April.

When the *Karlsruhe*, on a round-the-world training cruise, dropped into San Diego, members of the San Diego Yacht Club inquired if there were any yachtsmen aboard who would like to try a match race with a yacht manned by American officers. An affirmative reply led to the detailing of two Pacific Coast One-Design sloops, Ed Peterson lending his *Ni Ni Nie* to the Germans, and George Kettenburg providing a group of American destroyer force officers with the *Scamp*.

Notwithstanding the fact that they never had sailed a "PC" before, the German crew — Lts. Guenther Schmidt-Falbe, Wilhelm Rollmann, and G. Bachman, put on a fine exhibition, and at the end of the eight-mile run had the edge on their American rivals by just three minutes.



EDITORIAL

Play the Game!

YACHTSMEN would have you believe that as a class they are the finest, cleanest, most square-shooting bunch of sportsmen in the world. When any sharp trick is pulled off in any other sport, they self-complacently remind you that this could never happen in yacht racing. Would that we could echo these sentiments! As a matter of cold, hard fact, however, it must be admitted that no sport, not even yachting, has a mortgage on all the thorough sportsmen. Here and there, as in any other sport, we get a "chiseler" in whom the desire to win overcomes the spirit of fair play. Human nature, you will say. Perhaps; but we desire to believe that most men still want to play the game for the game's sake and would rather win by "superior skill and speed" than by finding some loophole in the wording of a rule that lets them evade its spirit and intent.

Since the adoption of the Universal Rule covering the sail area measurement, several new sails that are not clearly defined have come into being. Some of these sails have been barred in certain classes or races. Whether or not they should be restricted in use, is an open question. But, if they are barred, it is clearly not the part of good sportsmanship to try to evade the restriction by carrying a sail which clearly does not comply with the intent of the rule and the legality of which will surely be questioned by competitors or committee.

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Have All the Equipment Aboard

EVERY vessel driven by machinery, and that includes outboard motor boats and sailing yachts with auxiliary engines, is required by federal law to have on board certain specified articles of equipment while being navigated. Commercial vessels and steam driven craft are inspected yearly by the Steamboat Inspection Service and any defective equipment must be made good or replaced before the vessel's annual certificate is issued. Their owners and officers know in advance the date of this inspection and prepare for it. Motor yachts, while not subject to such periodic inspection, may be overhauled by one of the patrol boats of the Bureau of Navigation, Department of Commerce, at any time they are in commission. An experienced inspector from the patrol boat will then visit the yacht and make a thorough check of every item of her equipment. Should any article be missing or defective, the owner is subject to a fine.

While every yacht owner, as a rule, is anxious to obey the law and have his yacht equipped with all the safety devices specified in the federal Rules and Regulations, he should remember that this gear does not last forever and is apt to deteriorate in time. Life preservers, for example, may not lose buoyancy yet may become useless in an emergency because the thread securing the shoulder straps has perished. Fire extinguishers should be refilled at regular intervals. Fog horns may lose their voices entirely after a period of neglect, lying in a damp locker. Running lights may be improperly screened or of inadequate size. Certain items, such as life preservers and fire extinguishers, must be instantly accessible and not tucked away in a corner under a pile of odds and ends.

So, have all the required items aboard and stowed in their proper places, and make sure that they are in good condition. Then you can welcome the inspector and be sure that you will be spared the annoyance of a fine and the mortification of being a lawbreaker.

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Great Gain in Boat Registration

THAT several years of severe economic depression have not had any great or permanent effect on the use of boats for pleasure or sport is borne out by the recently published figures on the registration of numbered motor boats in federal waters. These tabulated figures show that in 1933 the registered fleet was increased by 26,319 motor driven craft. The totals for the year in question are 291,018 numbered boats, as against 264,699 for 1932. Which is a healthy sign, nearly everyone will admit.

The figures quoted above, however, need some explanation, and this is furnished by the statement that much of this gain is due to the fact that during the year the Federal Government required the numbering of all motor boats, regardless of length, that were built especially for equipping with outboard motors, and not alone those of 16 feet or over in length, as was the case before. The new ruling does not, however, include rowboats, rowing tenders, canoes, or small sail boats which are only occasionally used with an outboard.

Granting that this big jump in registration is due in large part to the change in ruling on outboard boats, it shows most forcibly what a hold the little outboard outfits have on the boating public. Few of us would have believed that some twenty-five to twenty-six thousand outboard pleasure and racing boats under 16 feet in length were in use on Federal waters alone. An equal increase on inland and state waters would bring the total to double the number mentioned.

IN THE WORLD OF YACHTING

"The Bermudian" Studio

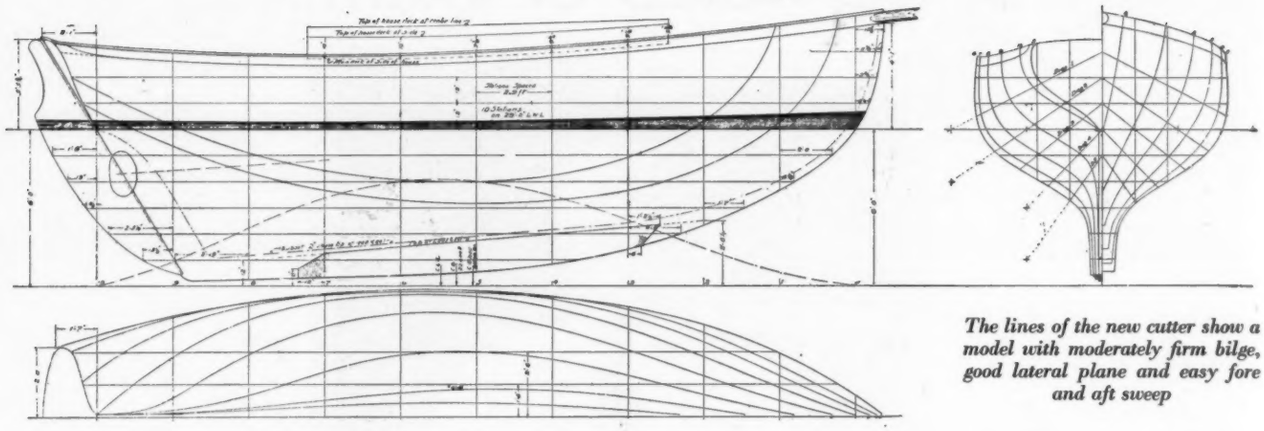
JAMES E. PEARMAN

HERE we have James E. Pearman, one of Bermuda's "crack" skippers and at present Rear Commodore of the Royal Bermuda Yacht Club. As the winner of the coveted Prince of Wales Trophy in the recent Six-Metre series sailed off Hamilton, he beat several of the topnotchers in this hard-sailing International Class.

"Jim" Pearman began coming to the front in the Bermuda One-Design Class, in which he sailed his "Starling" in the matches against the Long Island Sound Interclub Class both at Bermuda and on Long Island Sound. He was a member of the team this year that beat the Interclub boats in four straight races early in April. Then, stepping into the Six-Metre "Achilles," he won two of the four races against the three "Sixes" from the United States, and was high boat with twenty-one and a half points to his credit — which is "going some" in that company.

Like most 'Mudians, Pearman learned to sail a boat while still young. He has been at it for some time now, and in stiff competition with such clever racing skippers as Eldon and Kenneth Trimingham, Bayard Dill, Hal Butterfield and Ted Gosling, he had no easy road in working his way to the top. However, he has "arrived," as his work this year testifies.

"Crusoe," A Trim Auxiliary Cutter



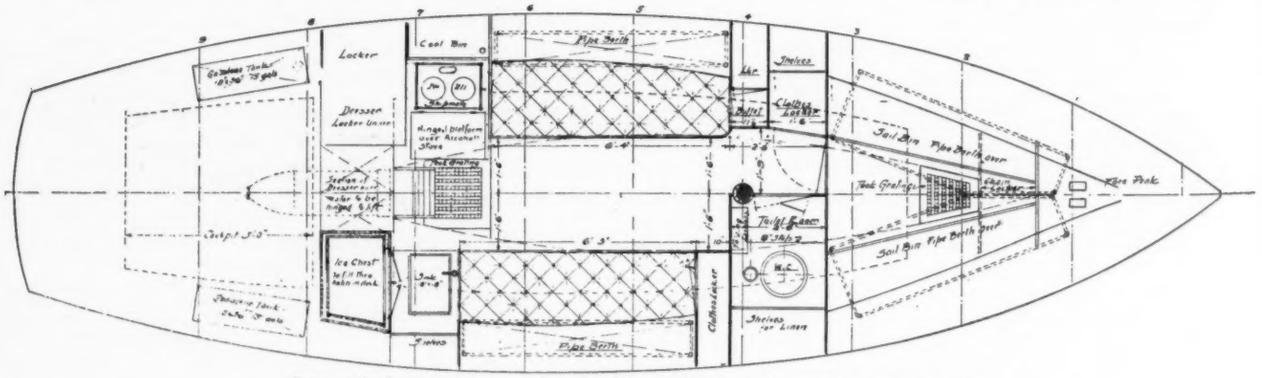
The lines of the new cutter show a model with moderately firm bilge, good lateral plane and easy fore and aft sweep

DESIGNED by Charles D. Mower for J. Thornton Mills of the Larchmont Y. C., *Crusoe* was launched from the yard of Julius Petersen, Nyack, N. Y., on April 17th. She is 32′ 2″ over all, 29′ 0″ l.w.l., 9′ 8″ beam and 5′ 10″ draft. Her displacement is 22,400 pounds and she carries 8600 pounds of lead on her keel. The sail area of 665 square feet is divided into mainsail, 370; forestaysail, 109; jib, 112; and topsail, 74. The motor is a Universal "Superfour" turning a Hyde feathering wheel. Spars are solid, of Sitka spruce, made by the Pigeon Hollow Spar Co., and sails are by Burrows. The standing rigging is stainless steel wire rope.

Keel and framing are of white oak, with numerous bronze heel straps; outside planking, 1⅛″ thick, is teak below the turn of the bilge and Honduras mahogany above. Fastenings are Everdur screws and Tobin bronze bolts. Cabin trunk, deck, rail and deck joinerwork are teak. Special bracing, with cast bronze hanging knees and steel angle bars, is fitted in wake of the mast. Under the keel is a ¼″ Everdur plate, the same siding as the keel, for protection when hauling out or if she should take the ground.

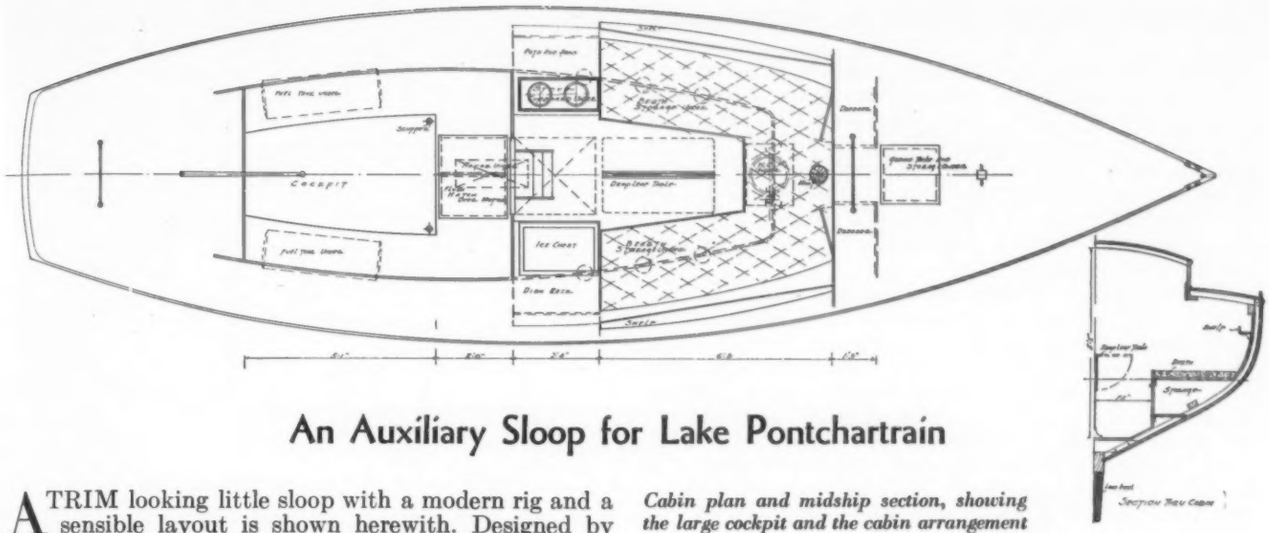
The cabin layout has a number of interesting features. The toilet room floor is zinc sheathed and watertight, with a stainless steel tray on the step, and a drain to a slop tank so that bathing with a bucket of water will be possible. The cabin transoms are seats, with pipe berths over them. The galley is sheathed with stainless steel and has a No. 211 Shipmate coal range and an alcohol stove. Ample lockers for food supplies and cooking equipment are provided. A grating aft, at the foot of the companion ladder, and another one forward insure ventilation to the bilge. The water tanks, 60 gallons total capacity, are under the cabin transoms, and two 15-gallon gasolene tanks are under the cockpit. Here, also, are small tanks for lubricating oil, alcohol, kerosene and signal oil, all filled from the cockpit and piped to the galley.

The sail plan shows the conventional cutter rig



The cabin layout is practical and well considered, with many interesting features

The plans reproduced in this section are the property of the designers under whose name they appear. Further information concerning any design should be addressed direct to the naval architect in question.



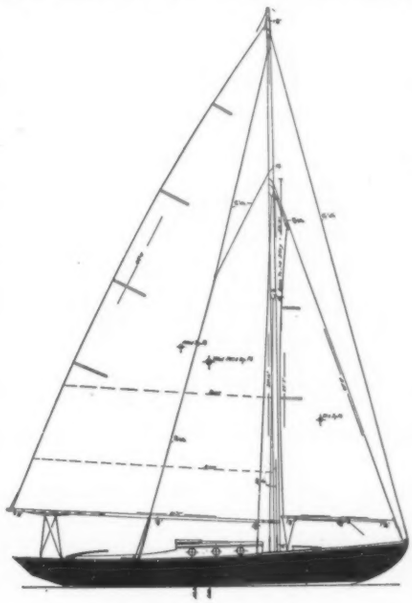
An Auxiliary Sloop for Lake Pontchartrain

Cabin plan and midship section, showing the large cockpit and the cabin arrangement

A TRIM looking little sloop with a modern rig and a sensible layout is shown herewith. Designed by John O. Prados, naval architect of New Orleans, for R. R. Beasley of that city, she is now nearing completion in the Pen of the Southern Yacht Club. The new boat is 31′ 9″ length over all, 22′ 6″ length on the water line, 9′ 1″ extreme beam, and 4′ 1″ extreme draft. The lines show a fairly firm bilge and a long straight floor, a moderately flat sheer and medium ends, with enough lateral plane to make a centerboard unnecessary.

The boat is well put together, with keel, stem and deadwood of live oak and long leaf yellow pine. Frames are of white oak, steam bent, and floors, deck beams and stringers are of yellow pine. Planking, deck, cabin floor and ceiling are of Louisiana red cypress, while cabin trunk, coaming, rail, transom and trim are of mahogany. All hardware is of bronze. The ballast is of lead, 3000 pounds, and will be practically all on the keel.

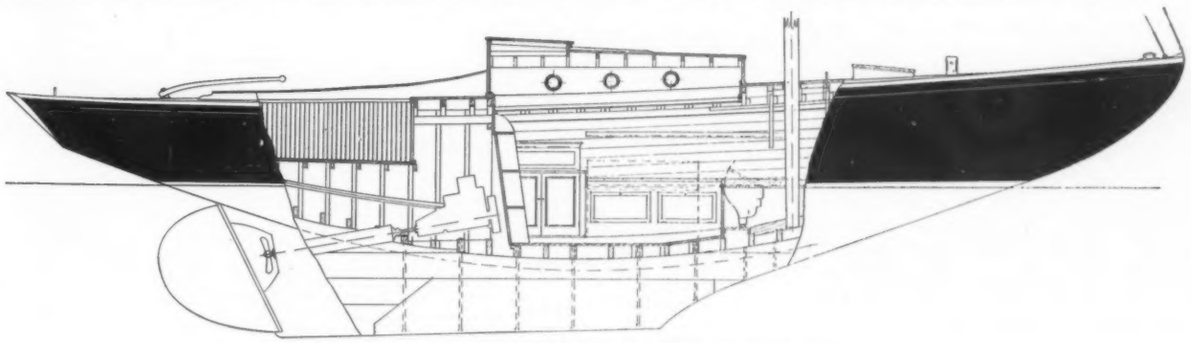
The rig is modern and fairly high, and the total sail area is 567 square feet, 456 feet in the mainsail and 111 feet in the jib.



The sail plan is high

While the boat is intended to be used primarily for day sailing on Lake Pontchartrain, she is being fitted with limited cruising accommodations. The arrangement is conventional but entirely practical. Under the deck forward, reached through a hatch, is ample stowage space for ground tackle and boatswain's stores. The main cabin has lockers forward, a good sized transom berth on each side, with stowage space under, and a drop leaf table on the center line. A toilet is fitted between the forward ends of the berths and is concealed under the cushions. The galley is aft, with a small stove and plenty of locker space on the port side, and an ice box and dish racks to starboard. The cockpit is roomy, with a bridge deck across the forward end of it. Under this bridge deck will be installed the motor, a marine power plant of about 14–16 horse power, separated from the cabin by a bulkhead. With the large flush hatch in the deck open, the power plant is easy to get at. Fuel is carried in tanks under the cockpit seats.

With her high, narrow sail plan and moderate ends, the new sloop should show a fair turn of speed and should not be bothered by the short choppy sea that gets up so quickly in the lake when it breezes up. Her draft is about all that can be used in her home waters and yet should be enough to make her weatherly. She should be comfortable even when cruising in the Gulf.



The new sloop has a fairly large amount of lateral plane

A Husky Motor Ketch by Kromholz

THIS interesting yacht, now under construction at City Island, N. Y., was designed by Kromholz, naval architect of New York, for Anton Bruehl of that city. Her principal dimensions are as follows: length over all, 50′ 8″; length on load water line, 46′ 8″; beam to outside of planking, 14′ 3″; draft, extreme, 5′ 4″. As the plans show, she is a husky, full bodied craft with short forward overhang and raking transom. The fore and aft lines are easy.

Construction is to rigid specifications calling for the best in material and workmanship. Keel, stem, sternpost, frames, floors and deck beams are of white oak. Outside planking is of $1\frac{1}{16}$″ teak below the water line with mahogany on the topsides, fastened with Everdur screws. The deck, main rail, and all exterior joinerwork are of teak while below decks the bulkheads, berth fronts, etc., are of maple with teak trim. The deck is to be holystoned while the joinerwork exposed to the weather is to be finished with linseed oil. There are three watertight steel bulkheads, one between the galley and the forecastle and one at each end of the engine compartment.

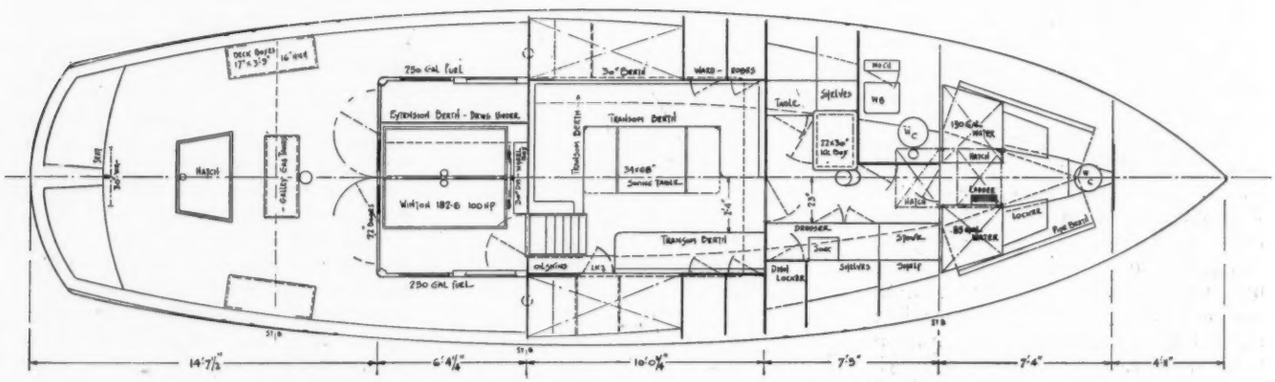
The yacht will carry hollow spars and a marconi rig of moderate size, the total sail area being 840 square feet. Of this, 195 square feet are in the jib, 480 in the mainsail, and 165 in the mizzen. The sails will be of khaki canvas and the blocks will be supplied by Merriman. She will have considerable ballast, there being 6200 pounds of lead on the keel. This is not soft lead but a hard alloy to prevent surface damage.

The power plant is a 182–6 Winton Diesel, a 6-cylinder machine of 5″ bore and 7″ stroke which develops 100 h.p. It will turn a Hyde wheel through a monel shaft. The yacht's designed speed is 10.5 m.p.h. Two steel tanks, of 250 gallons each, hold the fuel supply which gives a cruising radius of 1000 miles. Water, to the amount of 215 gallons, is carried in two copper tanks. Piping is of brass throughout.

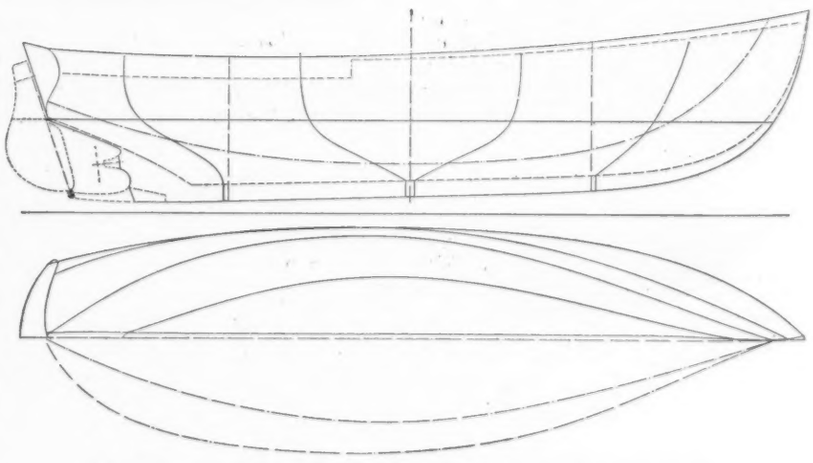
Forward of the mainmast is a box skylight with a hinged hatch over the forecastle and one over the galley and the toilet room. Amidships is a short trunk with a deckhouse abaft it, the forward part of the house extending over the trunk. Abaft the trunk, the deck is dropped 14″. On the port side of the deckhouse is a transom seat which may be extended to form a berth. A steering wheel for use when under power or in bad weather is in the deckhouse and there is also a fair weather wheel aft.

Below decks, forward, is the forecastle with two pipe berths, seat lockers and toilet. Next aft is the galley with

The outboard profile shows a snug rig



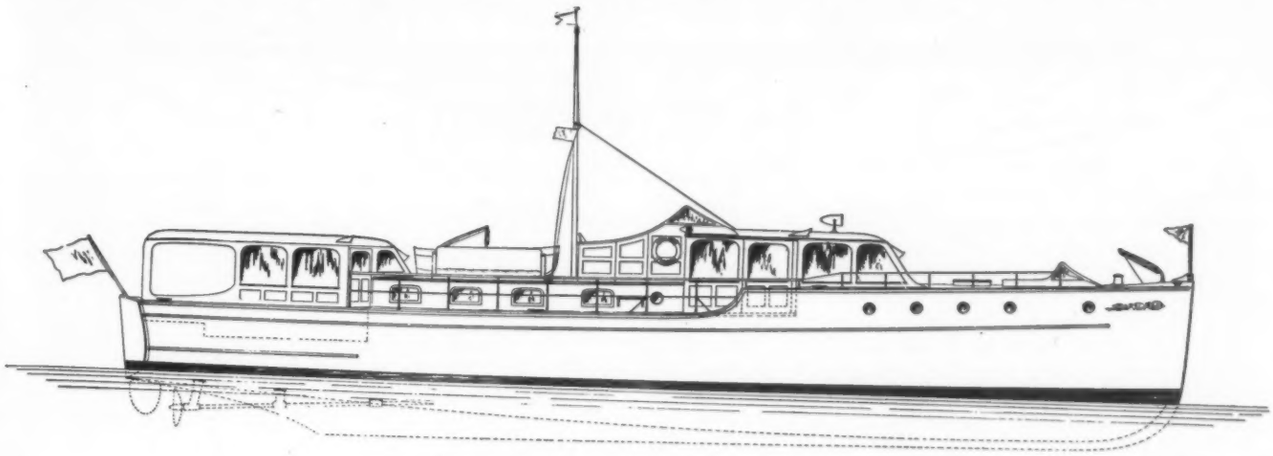
The accommodation plan provides for six in the owner's party and two men forward



The dot and dash lines in the half breadth plan ate inclined water lines

monel covered dresser, sink, refrigerator, stove, and the usual lockers and dish racks. On the port side is a toilet room. The main cabin, which is 10′ by 14′, is amidships. It is fitted with cushioned seats, five berths, five wardrobes, and drawers. Abaft the cabin is the engine room, with access through large flush hatches in the deck. Particular attention has been paid to the ventilation of this compartment and, indeed, of all parts of the yacht.

The contract was placed early in January with Robert Jacob, Inc., delivery being called for the latter part of May. With her black topsides, bronze bottom and khaki sails, the new boat should look able and sassy.



The outboard profile shows a modest amount of streamlining

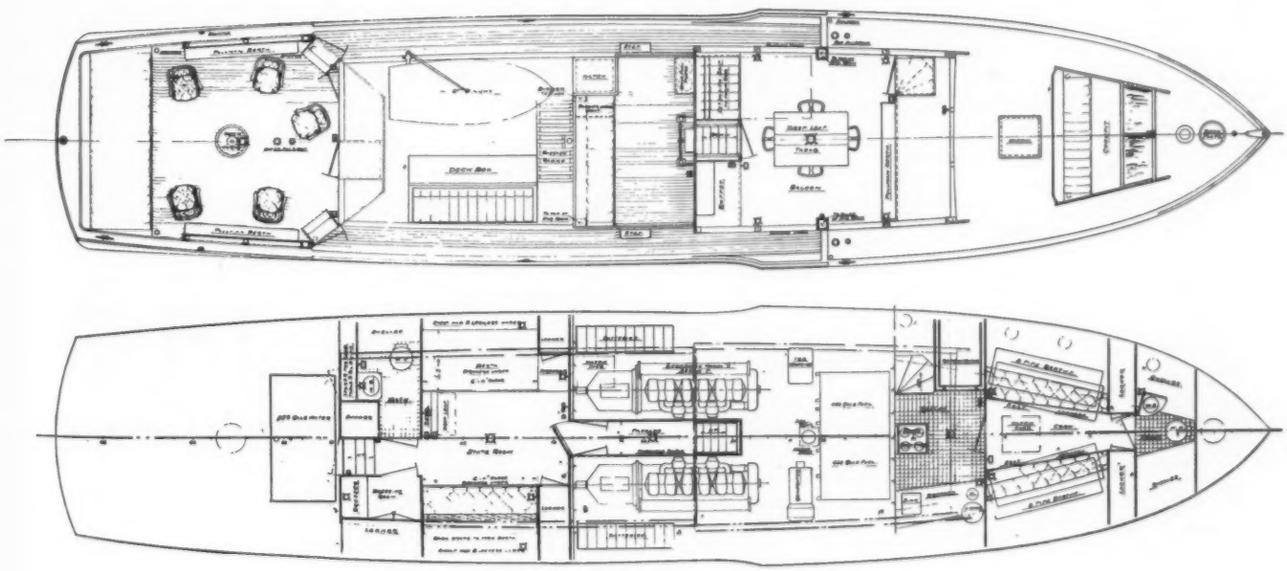
"Grey Gull," the Newest Speedster from Consolidated

IN DESIGNING this attractive motor yacht, completed last month by Consolidated Shipbuilding Corporation of Morris Heights, N. Y., a modest approach toward the streamlining of the latest automobiles has been made, at least as far as the upper works are concerned. The new vessel is 66′ 6″ long over all, 14′ extreme beam and 3′ 7″ draft. The main deck is teak, as are the deckhouses and cabin trunk, and there is also considerable teak used in the joinerwork below decks.

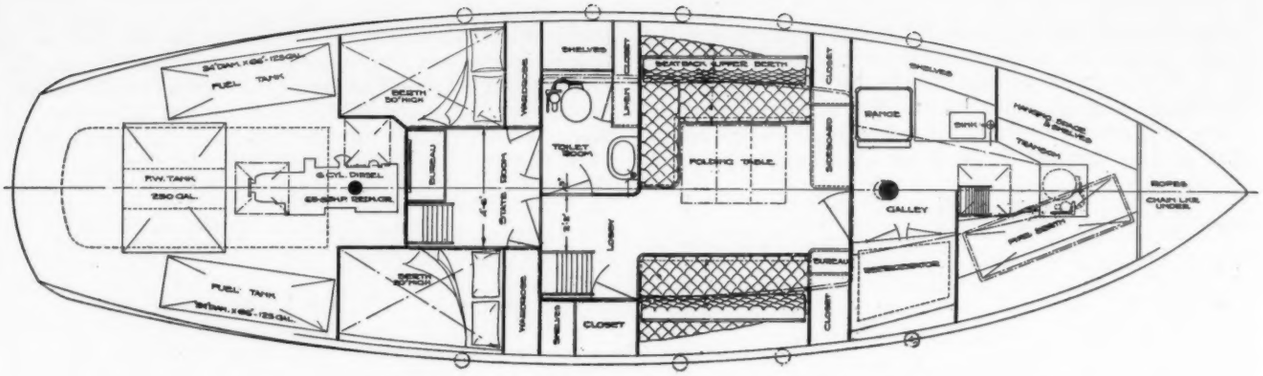
The yacht is of the raised deck and trunk cabin type, with plumb stem and transom stern. Forward is a roomy cockpit, with raking windshield and a wide cushioned seat. The forward house is used as the dining room and lounge, being fitted with buffet, etc., and a pullman berth. The bridge is abaft the forward house on top of the trunk, while aft is a deck shelter which may be completely enclosed with curtains. Two pullman berths are in this house.

Below decks are the forecastle, crew's toilet and galley forward, while aft is the owner's stateroom with toilet room adjoining. The engine room is large and houses a pair of 300 h.p. Speedway motors which give a speed of 23 m.p.h. Fuel is carried in two copper tanks of 800 gallons total capacity and 350 gallons of water, also in a copper tank, is under the after deck.

The yacht, which has been named *Grey Gull*, is owned by W. S. Carpenter of Wilmington, Del.

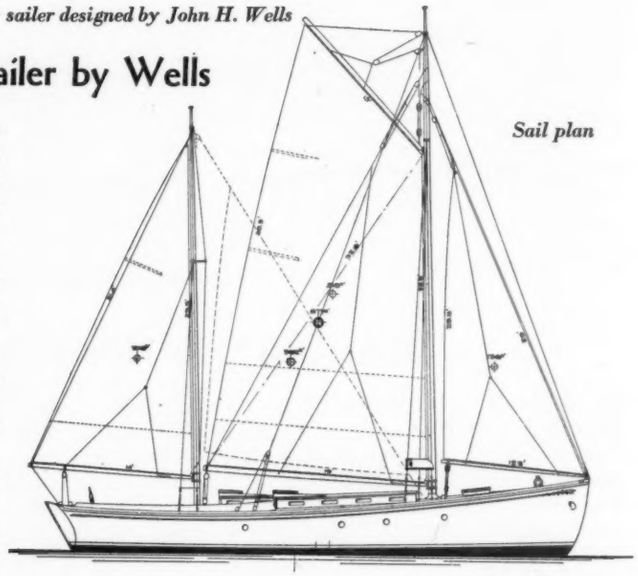


Cabin plan and deck plan of the new fast cruiser "Grey Gull"



Accommodation plan of the motor sailer designed by John H. Wells

A Motor Sailer by Wells



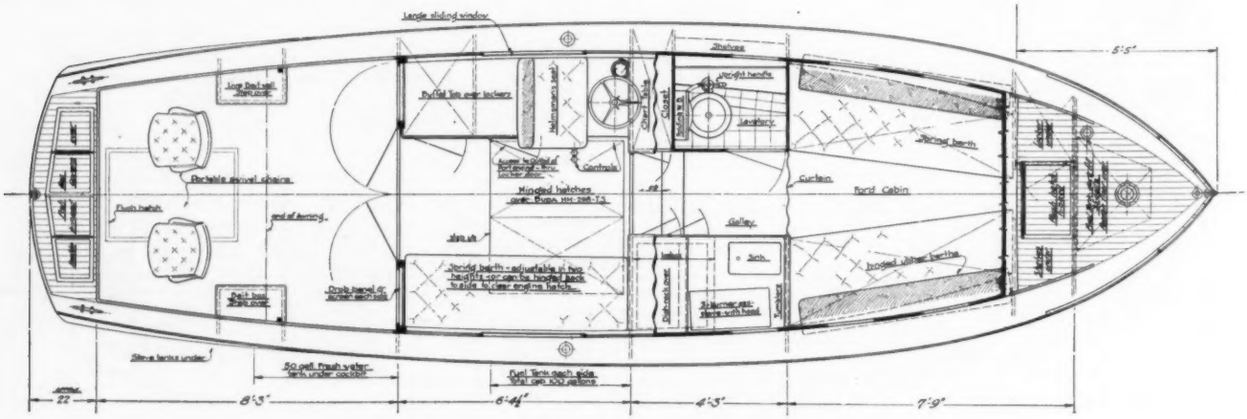
Sail plan

TO MEET the requirements of a yachtsman who wished more than the ability to sail with a fair wind or plod along under power, desiring a boat that can work to windward and have the ability to go offshore occasionally, this motor sailer was designed by John H. Wells. She is 47′ 6″ over all; 42′ 6″ l.w.l.; 13′ 6″ beam and 5′ 6″ draft. She is ketch-rigged, with a total sail area of 877 square feet in the three working sails, not including the mizzen staysail. Her engine, a 65–85 h.p. Diesel with reduction gear, will drive her between nine and ten miles an hour. A generator, driven from the main engine, will supply current for lighting, ventilation, etc. Two 125-gallon fuel tanks and a 250-gallon water tank are under the after deck.

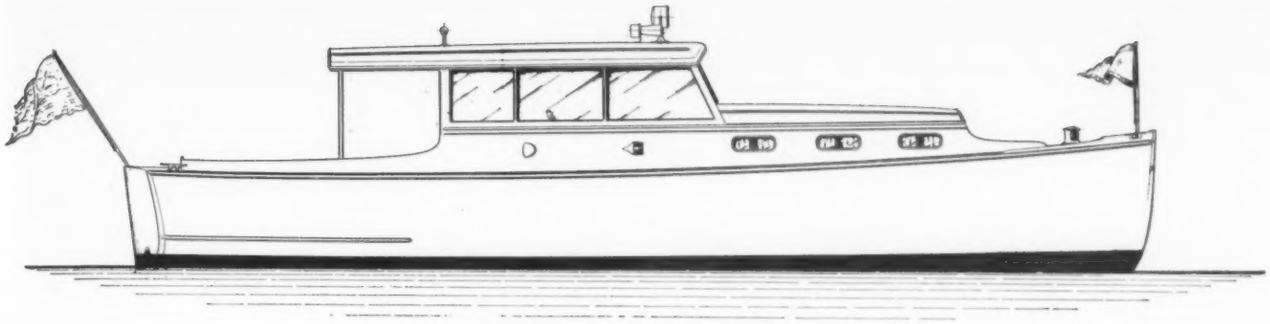
The arrangement plan is interesting, with forecastle and galley forward, a main cabin sleeping four in broad transom berths and folding uppers, and provided with closets, buffet and bureau; toilet room; and a double stateroom with separate companionway. The cockpit is capacious, being 14′ 6″ long and 4′ 8″ wide. Construction throughout follows sailing yacht practice rather than motor boat methods. The mizzenmast is stepped on substantial cross members over the engine and is well stayed, a practice which has been long in vogue abroad. Standing rigging is of stainless steel.

The Elco Twin Screw Fisherman "Nan C III"

THIS special model Cruisette "32" is now under construction at the Elco Works, Bayonne, N. J., for S. E. Morris of New York and Larchmont. She is 32′ 4″ over all, 9′ 6″ beam and 2′ 6″ draft. Hull and joinerwork are the same as in the standard Cruisette except as follows: The forward cockpit has been omitted and the trunk cabin extended to permit four comfortable berths in the cabin. The forward deck is flush and is fitted with a flush hatch from which the anchor may be handled in bad weather. In the deck cabin, a fore and aft seat



Arrangement plan of the Elco Special Fisherman Cruisette



Outboard profile of "Nan C III"

berth has been substituted for the starboard 'thwartships seat to provide sleeping quarters for the paid hand. On the port side is a large locker with buffet top. Hinged doors, panels and screens enclose this cabin.

The cockpit is large and is fitted with bait wells (the tops of which form steps), portable swivel chairs and a copper-lined fish well under the after deck. The engines will be two Elco Budas developing a total of 130–140 h.p. and driving the boat 20–22 m.p.h. These will be installed on Elco rubber mountings.

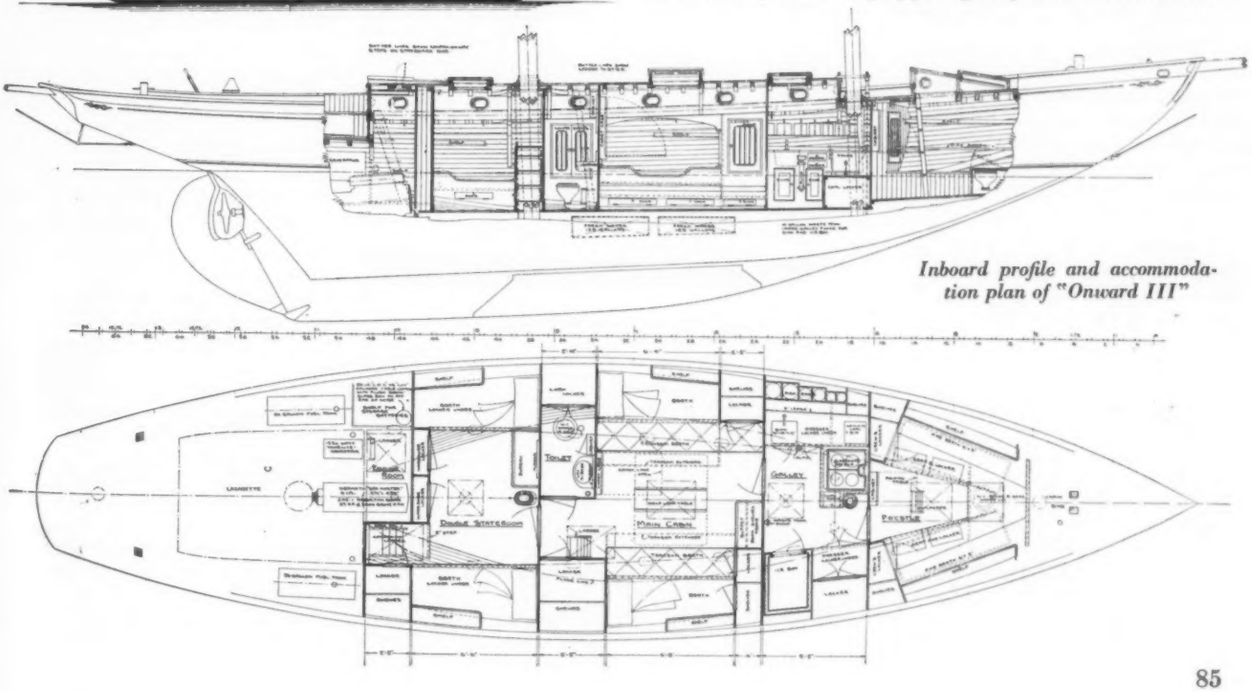
"Onward III," a Modern Schooner Yacht

Sail plan

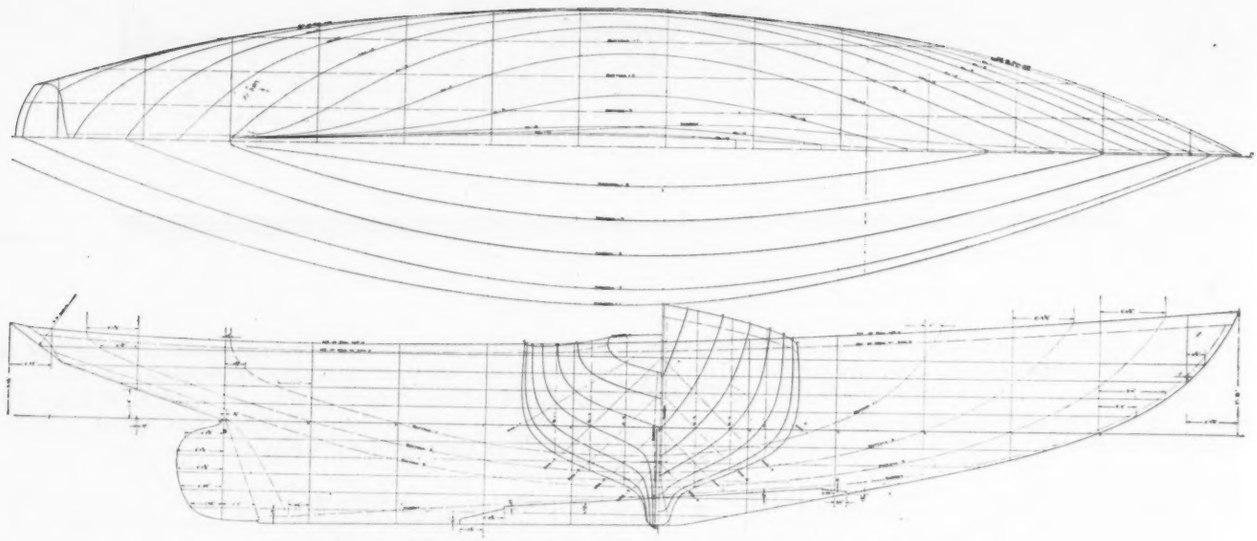
AN ATTRACTIVE schooner from designs by John G. Alden is now being built at the Goudy and Stevens yard in East Boothbay, Maine, for Phillips N. Case of Springfield, Mass. She is the second Alden yacht Mr. Case has owned and is 60′ 8″ length over all, 45′ l.w.l., 14′ 9″ beam and 7′ 11″ draft. About 21,000 pounds of lead is carried on the keel. The motor, a 65 h.p. Kermath with reduction gear, is installed on the center line aft. Her speed under power should be nine to ten miles an hour.

The plans show a vessel with an easily driven hull and a moderate sail plan, short on the base line and fairly lofty. The most striking feature of the rig is the permanent backstay with a short bumpkin which is being used for the first time on a modern schooner, although it has been tried out on other rigs. With the large diameter hollow mainmast used, the designer is confident that this will work out satisfactorily.

The arrangement plan shows a large double stateroom, toilet room, comfortable quarters for four in the main cabin, a well equipped galley and a forecastle.



Inboard profile and accommodation plan of "Onward III"



Sheer, half breadth, and body plans of auxiliary building for D. H. Morris, Jr.

"Alsumar," a Light Draft Cruising Yawl

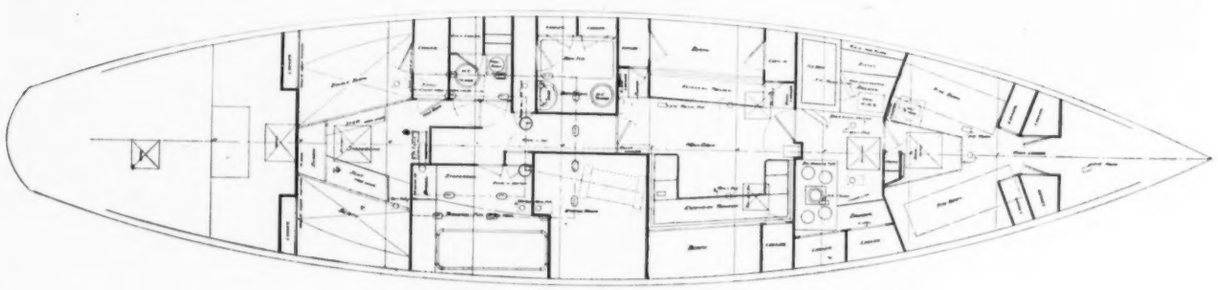
THE YACHT shown on this page was designed by Sparkman & Stephens, Inc., for Dave H. Morris, Jr., of Armonk, N. Y., as a comfortable family cruiser. Her principal dimensions are: Length over all, 70′ 8″; length on water line, 50′ 0″; beam, 15′ 9″; draft, with centerboard up, 5′ 10″. She is now under construction at the yard of Jacobson & Peterson, Brooklyn, N. Y. Keel, framing and deadwood are of oak, outside planking of Philippine mahogany, and deck and deck joinerwork of teak. All fastenings are of Everdur bronze.

The engine, a Buda Diesel of 85 h.p. with reduction gear, is installed in a separate compartment on the starboard side amidships while the propeller is under the port quarter. Two iron fuel tanks hold a total of 250 gallons of oil, while fresh water to the amount of 375 gallons is carried in a tin-lined copper tank.

Alsumar is fitted with a rather snug rig of 1705 square feet in the four lowers, divided into 267 in the jib, 220 in the staysail, 1230 in the mainsail and 208 in the mizzen. Spars are hollow and the standing rigging is of stainless steel wire rope. All deck hardware is of bronze. A specially designed roller reefing gear is fitted to the mainsail. A Nevins windlass, like that on *Brilliant* and *Mistress*, is installed, and a Herreshoff steering gear.

Sail plan of the new yawl

A "doghouse," with transom berth on one side and chart table on the other, is built at the forward end of the cockpit. Below, the yacht has been divided to afford a stateroom for the owner and his wife, also a guest stateroom, while provision for the three children and their nurse is made in the main saloon, there being two extension transom berths and two fixed berths. On the port side is a bath room and also a toilet room. Forward of the main cabin is the galley, the full width of the yacht, with Shipmate range, sink, ice box, dresser and the usual lockers and dish racks. Forward of the galley is the forecastle, with two pipe berths.



The cabin plan of "Alsumar" shows the quarters well divided

Comment From Our Readers

The experimental whaleboat issued to the U.S.S. "Northampton" is a carvel-built 30-foot centerboarder with a jib-headed ketch rig

Courtesy Puget Sound Navy Yard

Adventures on a Round the World Cruise

THE following letter has been received from Captain Irving Johnson, who is in charge of a party making a round the world cruise in the 90-foot auxiliary schooner *Yankee*. Captain Johnson, it will be remembered, was one of the crew of the *Shamrock V* when she returned to England after the America's Cup series in 1930.

"This cruise has turned out to be just the kind I've been dreaming about, partly because the crew is the most congenial one could ask for. We are now just a short distance from Tahiti and on deck I hear sounds of the crew polishing off the last few watermelons of a deckload of 120 that were given to us by the descendants of the *Bounty* mutineers.

"Pitcairn Island turned out to be a regular Garden of Eden, providing us with thousands of bananas, bushels of limes, pineapples, pumpkins, muskmelons, oranges, snow fruit, passion fruit, rose apples, and mangoes. All this after a three weeks' passage from the Galapagos Islands where we had the time of our lives and are going back some day.

"We had beautiful weather, but rather weak Trades crossing the Pacific. On the twenty-first day three of us went through some terrific breakers in the small boat to land on uninhabited Henderson Island which is about a hundred miles from Pitcairn. We were lucky to get through the surf with a dozen coconuts and the next morning arrived at Pitcairn. The somewhat wild-looking inhabitants came out in their 37-foot whaleboats, which they made themselves, and about fifty of them swarmed aboard the minute they got alongside. After a couple of days at the strange island we went on to beautiful Manga Reva with its pearl lagoon and barrier reef.

"There we found seven shipwrecked Pitcairn islanders who had been wrecked on an island close by some five months before and who had no prospect whatever of getting home. We finally said we would take them back to Pitcairn, so one of the men brought his Polynesian sweetheart aboard with him and I married them at sea just before we reached Pitcairn.

"You can imagine what a 'kick' that was. The ceremony was conducted on the after deck and all hands dressed up in their best. The doctor, a man of 52, and, incidentally, the only person over 28 on board, gave the bride away, and Skelly Young, of Pitcairn, did the interpreting for the bride who could speak only Tahitian. Then we had wedding cake and lime juice.

"We got back to Pitcairn at night, but flashed the news ashore and as many as possible raced out through the surf in their long boats to greet their returning relatives. Half our crew went ashore with them that night and the next day they nearly sank us with gifts of fruit and other things.

"The lagoons, such as the one we anchored in at Manga Reva, are all I have read and dreamed about and we could have stayed weeks there, swimming around under water with water glasses on, watching the natives twenty or thirty feet down spearing beautifully colored fish right and left.

"The whole cruise is working out especially well and all hands are delighted with the variety of experiences."

IRVING JOHNSON

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Sailing in the Navy

Editor, YACHTING:

YOUR recent article by Mr. Loomis, "Are There Any Sailors in the Navy," and the later article by an officer of the *U.S.S. Richmond*, should make the photo and description of the new Navy sailing whaleboat of interest to you and your readers, as it seems to be a rather definite answer to Mr. Loomis' question.

It is not hard to understand a seeming lack of interest in the sport, when the available boats and their sailing (?) qualities are considered. From an enlisted man's standpoint, the boat purchased by the *U.S.S. Richmond* would hardly be an answer to their needs, while this new type of whaleboat will make a first-rate sailing boat available for their use.

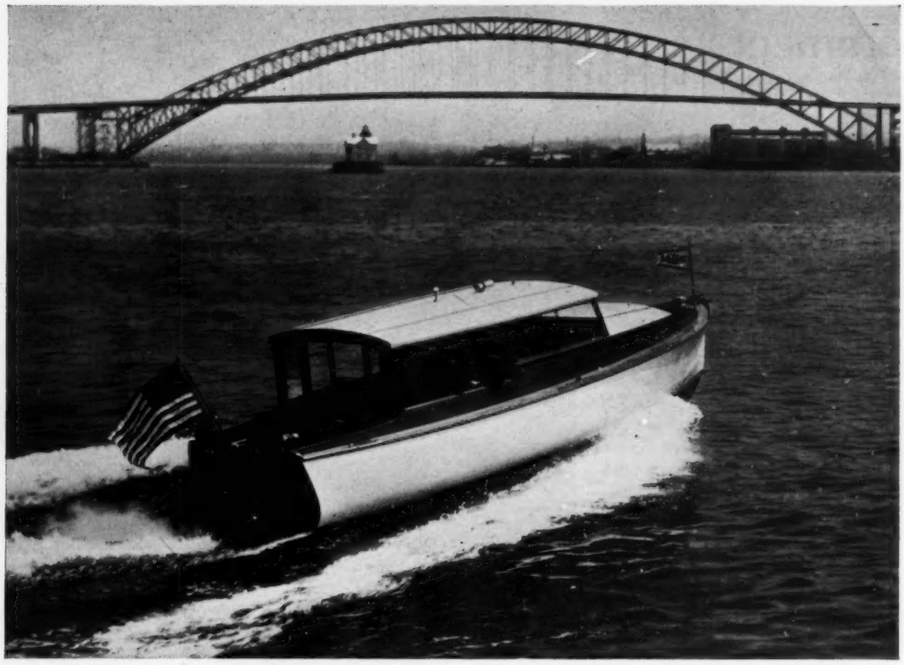
I have at present a 23- by 11-foot cat-yawl rigged boat and to date have never had to look far to find a crew for a week-end trip or longer — to the contrary, I find it almost necessary to make up a "waiting list."

The interest and expense undertaken by the crews in entering boats in the "free-for-all" races is also an excellent indication. These races are usually sailed in the regulation racing cutter, designed and built for pulling races and totally unfitted for sailing. Every conceivable type of rig is used and a race is more like "tight rope" walking than sailing.

Even with the almost non-existent windward qualities of the present whaleboats, it is not an uncommon sight to see a half dozen or more of these boats sailing around Navy anchorages on Sundays and holidays — with crews of enlisted men. With the ever present threat of a long pull home again if the wind and tide are not favorable, the desire for participation in the grand old sport must be strong. With the more general issue of this type of sailing whaleboat as recently issued to the *U.S.S. Northampton*, an even greater interest should be shown.

My viewpoint is entirely that of the enlisted man and there is no question but that, provided with a suitable boat, there would be no lack of experienced crews eager to race her in any ocean or other races, regardless of distance or conditions.

B. A. WHITE, JR.
Aviation Machinist Mate 2nd Class, U.S.N.



"Charm," Charles Pickel's 32-foot Cruisette. Her 80–90 h.p. Elco Buda drives her at 19 m.p.h.

Of Interest to the Skipper

"Hooded Power" for Auxiliary Service

RESPONDING to widespread interest in its new Imperial models for auxiliary use on sailing craft, and for emergency power plants on motor cruisers and runabouts, the Outboard Motors Corporation has brought out special Imperial models with lower housings 15 inches longer than standard.

The driving depth of these models, measured from bracket arch to center of propeller shaft, is 37 inches. On craft of average freeboard, this permits mounting on top of the transom with a simple fitting. On higher transoms, various types of brackets may be used.

The new Imperial Lightfour and Lightwin are particularly well adapted to auxiliary purposes. Exceptionally powerful, they weigh but 58 and 47 pounds respectively — and lightness is exceedingly important if the motor is to be mounted when there is any sea running. Controls are simple. The Simplex Starter eliminates starter cords and makes starting easy under adverse circumstances. These models are fitted with special heavy duty propeller.

Where less driving depth is needed, Imperials and all the other Elto and Evinrude models are furnished five inches longer than standard.

Every boat presents a different problem in mounting an auxiliary outboard motor. Almost every conceivable installation has been worked out by the Corporation's service department, which will send detailed recommendations on receipt of sketches showing type of transom and necessary dimensions.

Full information and prices will be furnished by the Outboard Motors Corporation, Milwaukee, Wis. Deliveries of the auxiliary models are now being made.

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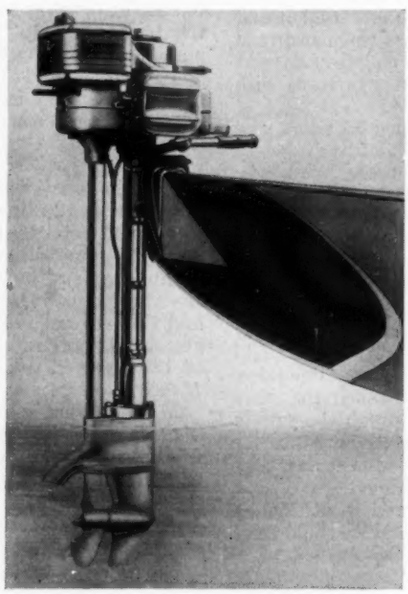
The Sailaway Cruise

Seventeen Richardson Cruisabouts are now on their way from the yard of their builders, the Richardson Boat Co., Inc., of North Tonawanda, N. Y., to New York City. The fleet, the largest in the history of the Sailaway Cruise with but a single exception, is made up of Richardson Juniors, Cruisabouts and Little Giants. The cruise, started as an experiment a few years ago, has proved so valuable as a training school and so enjoyable, that it has become an important annual event. The fleet is in charge of James E. Gillespie, Sales Manager of the Richardson Boat Co., who is accompanied by a staff of mechanics and helpers.

The boats keep together through the voyage of 490 miles, which is made in easy stages and entirely by daylight except for one short run after dark to give experience in night running. Stops are scheduled at Rochester, Weedsport, Rome, Schenectady and Kingston. The cruise started from North Tonawanda May 27th and is scheduled to finish at New York City on June 1st.



A special length Imperial Lightfour

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The Essomarine Line

A new line of marine oils and greases which will be marketed under the trade name of Essomarine has been developed by the Standard Oil Co. of New Jersey after six years of research. The new products include Essomarine Engine Oil, Break-In Oil, Gearol (gear oil), U. G. (underwater gear) Lubricant, and Waterproof Cup Grease, all designed especially for motor boat needs. The new engine oil possesses viscosity-temperature characteristics suitable for marine use and provides piston seal, long engine life, and low oil consumption. It resists oxidation and has a low pouring point and a high flash point with a minimum tendency to carbon formation.

The new line will be distributed by dealers along the Atlantic Coast from Maine to South Carolina and on inland waters in eighteen states from Maine through Louisiana.

ADVERTISING PAGES REMOVED

Matthews "Sailers" under construction in one of the company's four large shops

Matthews Deliveries Numerous

Deliveries of Matthews "38" and "46" stock cruisers have been so frequent lately that the situation at the Matthews plants recalls the activity during the peak days of 1929. According to Carl S. Matthews, Vice President, the rate of production is approaching that of 1929 and the pay roll for the first half of May was the largest since 1930.

Among the recent deliveries are the following: "38" Sport Cruiser to a New York yachtsman; a "38" Enclosed Double Cabin Cruiser to a New Jersey owner; a "38" Single Cabin Enclosed Deckhouse Cruiser to Dr. Sovak, New York; a "38" Twin Cabin to E. V. C. Martindale, Miami; a "38" Sport Cruiser to J. T. Troll, Miami; a "38" Twin Cabin to E. M. Gregory, Detroit; a "38" Sport to B. Dodson, Miami; a "38" Sport to W. F. Cheek, Miami; a "38" Enclosed Double Cabin to L. B. Holly, New York; a "38" Twin Cabin to R. V. Staats, Los Angeles; a "46" Enclosed Day Cruiser to D. A. Jones, Cincinnati; a "50" Twin Cabin to Col. Henderson, Washington, D. C.; a "46" Single to a Detroit yachtsman; a "38" Twin Cabin to H. A. Jones, Chicago; a "38" Twin Cabin to a Cleveland owner; a "38" Utility Boat to Mr. Cunningham, New York.

In addition to the cruiser deliveries, 27 of the new "Sailers" have been shipped to Bermuda, Boston, New York, Washington, Miami, Brunswick, Ga., Galveston, Texas, Los Angeles, Detroit, Chicago, Newport News and other points. Inquiries for the new "Sailer" have been received from 21 foreign countries, and plans are now under way to form a class of "Sailers" at one of the larger yacht clubs in France.

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For the Power Boat

An efficient sound signaling device is a necessity on any motor boat, being required by the government regulations, and a good searchlight is convenient for picking up moorings or locating buoys at night. Before going into commission, it will be advisable for the power boat owner to make sure that his equipment complies with all the legal requirements.

"Whistletone" horns and "Sireno" sirens are effective sound making apparatus and give a signal which will command attention. For night work, the well known "Half-Mile-Ray" searchlights are useful means of throwing a beam of light over the water when and where wanted. All three of these devices are manufactured by the Portable Light Co. of New York and may be bought at any well stocked ship chandlery.

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Champion Presents Trade Films

The Champion Spark Plug Company is presenting a series of movies with sound to jobbing organizations and the dealer trade. The demand is such that bookings are being made for weeks ahead. The program includes four subjects, tied together into an entertaining and instructive show.

The first covers the whys and wherefores of ignition systems, tracing the electricity from the battery to the spark plugs. This technical subject is handled by "animation," with an explanation of hot and cold types.

The second film, "Under Fire," covers the development of transportation and the part spark plugs have played in it. It shows the Champion sillimanite mine in California, the processing of the sillimanite, laboratory control, burning, glazing and testing; thence to Toledo, where the fabrication, assembly, and laboratory breakdown tests are shown.

The third film, "Champions Use Champions," shows the use of Champion spark plugs in racing. Shots from recent events all over the world illustrate the widespread use of Champions and the gruelling treatment under which they stand up.

The fourth film, "Champions at Work," is a short merchandising film. The selling situations and opportunities here depicted have been incorporated in a booklet which is distributed by the company.

The Modern Spherical Compass

Some four years ago, Wilfrid O. White decided that the compass card would be steadier at sea if the bowl were spherical instead of flat-topped. The motion of a ship among waves, whether rolling or pitching or both, has a vertical component. In a flat-topped bowl, the liquid, if disturbed vertically, strikes the glass and then swirls around, carrying the card with it. In the spherical bowl, the liquid, being in the form of a ball with the card in the middle, remains still even though the bowl be moved, there is no horizontal swirl, and the card is steady. Moreover, in the new Kelvin-White spherical compass the magnetic element has been redesigned so that inertia and magnetic moment are in harmonious relation.

The spherical bowl and the liquid form a lens which magnifies the card. The steadiness and this magnification are but two of the improvements which have been made. Another is dispensing with the binnacle head of the steering compass, so that the watch officer as well as the helmsman can see the card.

Kelvin-White spherical compasses have been tested on long voyages with complete success. The American-Hawaiian Line has recently ordered these compasses installed in 25 of its ships and the U. S. Coast Guard has ordered 38 for the new 165-foot cutters.

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Foreign Sales Increase

News of improved business conditions at home and abroad is supplemented by a report from the Propeller Division of the Federal-Mogul Corporation of Detroit concerning increased sales of Tru-Pitch propellers in foreign countries. During the past six months, sales have shown a most satisfactory increase as compared with the same period last year, according to T. W. F. Meyer, manager of the Propeller Division. Recent export shipments have included substantial consignments to Switzerland, British Guiana, Belgium, Germany, England, Norway and Austria.

Cruel and Abrasive Treatment

(*Continued from page 51*)

of lighting a large fat Havana. He deserved it. But his respite was nipped short off when he became aware of a large school of porpoises coming down channel and heading directly for the *Gotter*. They were returning from some jamboree up the Tamiami Canal and were out for a good time. Their mood was as frisky as the wind and they were happy to be in clear salt water again. Also, I have an idea that they were in search of some nice place where they could rub off their *cyani ovale*, as the professor would call them, or the sea-lice which commonly beset these mammals like the seven year itch.

Spotting the lone *Gotter*, the leader of the gang dove toward her, just to see how close he could come to her centerboard and yet miss it. *He* missed, thanks in part to a quick maneuver on the part of the doctor. But in sheering over, the frilly bottom of the *Gotter* came in contact with the back of another galoot who was darting by just for a look-see, and the feel of those yielding corrugations against his lousy hide was something new and pleasing.

"Hey, fellers," he blew, "pipe the new cootie curry! It soothes as it rubs 'em off, and leaves your skin smooth as a mermaid's!" Like a cold cream ad, only it was an invitation to something that didn't cost anything. So the rest followed suit, and as the effect was better when they came bow on, their speed plus that of the *Gotter* affording the maximum degree of ecstasy, they did it that way.

This, naturally, raised particular hob with the poor *Gotter* and from gliding swiftly along on her self-lubricating water-bearings, she was now merely bobbing in a seething welter, her progress being checked with every onslaught as the porpoises slid under her in two tangential orbits, port and starboard, rubbing their backs and sides and bellies in turn, and then doing the whole thing over again — just for the devil of it.

"*Gottverfluchte Meerschwein!*" swore the irate doctor, "diss iss no ring-around-der-rose-bush!"

But the sea pigs did not understand the doctor's German nor did they care a tinker's eyelash about his sarcasm so long as they were having their fun. And they were having it, after their own two-ring manner, despite their victim's efforts both of tongue and tiller to get rid of them. He jibed, blaspheming internationally, and they jibed with him, and he yawed and broached and filled away again to Greek and Latin proscriptions, though to no avail.

While this was going on, the fleet drew up apace, its amazed skippers first believing that the doctor was in battle with some crazy shark and then deciding that it was the doctor himself who must be crazy. But when they saw those milling circles of frisking porpoises, churning like pinwheels on either side of the harassed *Gotter* that now was nearly sewed all standing despite the urging of her sails that bulged and strained like grounded parachutes, they romped by with whoops of joy at the discomfiture of their luckless rival.

Those derisive whoops spurred the doctor's wits and if he could not wriggle clear from these pestiferous porpoises, at least he could wriggle the *Gotter* free of her skin that had brought on their unwelcome attentions. In fact, she was already making her own efforts in this direction, for no muslin, however strong, can long withstand such abrasion as it had been receiving and now it was torn in many places where it bagged like so many drogues. Quickly the doctor cut the lace-line and unrove the remnants from the hand rail. Then, as though relenting somewhat for the inconvenience they had caused their innocent victim — the novelty of their *jeu d'esprit* having worn off a bit — a pair of roysterers dove into

Who keeps everything spick and span?

Why, it's Bon Ami Chick the Sailor

And one of the jobs he does best is cleaning paint. Just try him on the sides of your boat and on the painted woodwork in the cabin. See for yourself how spotless and fresh he quickly makes them!

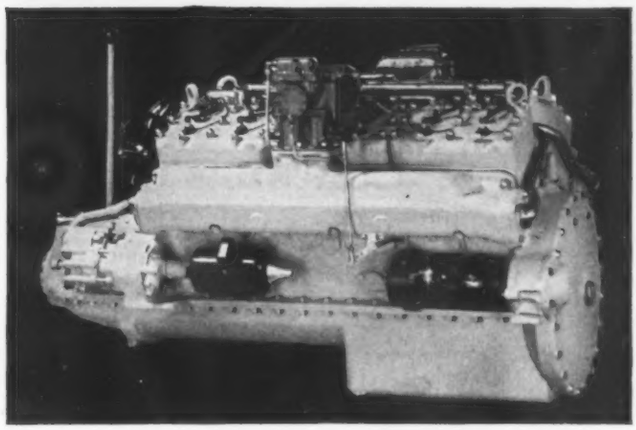
Then let him clean up the galley . . . put a fine shine on the brass . . . clear up the windshield and windows . . . and make the lavatory spotless.

You can get this handy helper at any grocery store and at most shipyards. Just ask for a Cake or a Can of Bon Ami—the well-known household cleanser that *"hasn't scratched yet."*

KEEP YOUR BOAT CLEAN WITH BON AMI

SCRIPPS

THE MOTOR THAT CROSSED THE ATLANTIC



Model 302—High speed, Vee-type 12-cylinder, 300 horsepower at 2400 revolutions per minute. Proving superiority of design, perfection of construction, and unequaled dependability of performance so prominent in all SCRIPPS engines regardless of model, power rating, or requirements of service.

To underpower a boat is folly. To overpower a boat is waste. . . . Regardless of what your new boat is to be, regardless of what your present boat is, whether pleasure craft or work-

Photo courtesy of John G. Alden, Boston, Mass.

boat, 15 feet in length or 90 feet overall, runabout, express cruiser, family cruiser, or auxiliary sail, there is, among the 32 SCRIPPS models, a power plant that will exactly fill all

Photo courtesy of Juan Ortholan, Tigre, Argentina

your power requirements. . . . In the SCRIPPS line of Strictly Marine Engines there are power plants for high or medium speeds in direct drive, 4, 6, and 12 cylinders, 25 to 300 horsepower in single installations, up to 600 horse-

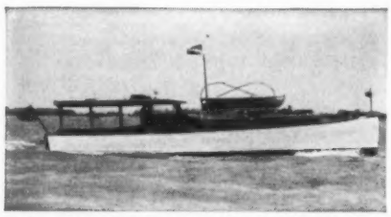


Photo courtesy of The Matthews Co., Port Clinton, Ohio

power in twin installations, and with reduction gears for the heavier hulls.

Before leaving the factory each engine is given a series of rigid tests and is thoroughly

Photo courtesy of Gar Wood, Inc., Marysville, Michigan

broken in. Which means that a SCRIPPS engine may be used to the extent of its rated horsepower from the time installation is completed.

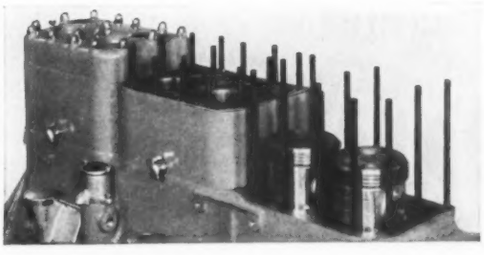
The proof of SCRIPPS distinctive fitness for your individual requirements is in the fact that there are hundreds of boats in the same class, boats practically paralleling yours, powered with SCRIPPS. The owners of these boats willingly testify to the complete satisfaction and recognized superiority to be found in every SCRIPPS.

You'll be wise to choose a SCRIPPS power plant

There is a great deal more to a SCRIPPS engine as power equipment in a new boat than mere power. There is more in a SCRIPPS engine as power replacement in a used boat than the mere renewal by one wherein the only superiority is in its newness. In a SCRIPPS there is universal reputation for dependable power and unsurpassed performance gained through 28 years of unequaled accomplishments in all waters of the world. ' ' ' In a new SCRIPPS installation there is enduring, dependable, economical performance. In a SCRIPPS replacement installation there is complete "Regeneration",* new life, superior performance, new boat value. ' ' ' In a new boat or in a used boat you will obtain through a SCRIPPS power plant that greatly desired instant response, that smooth, steady power fully adequate and ever constant. It will fill your demands as if it were individually designed for your boat and for it alone. ' ' ' You owe it to yourself to gain a thorough knowledge of SCRIPPS. You will find the price so reasonable that if you can afford a good hull you can well afford a SCRIPPS.

**"Made over in a better form"—Century Dictionary.*

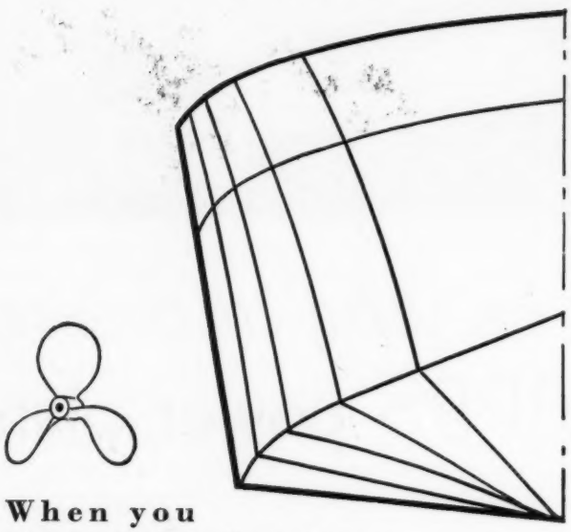
WRITE today and learn the moderate cost of a SCRIPPS power plant for original equipment or for replacement installation. Give essential details—length, type of craft, speed desired, or horsepower needed. We will send you illustrated literature fully describing the model we will recommend as best suited to your individual requirements.



Illustrating the perfection of unity and balance, the simplicity, sturdiness, and compactness so distinctly SCRIPPS. Showing how cylinders and cylinder heads are cast in pairs; how studs through heads and block walls to base type of construction make possible trueness and permanency of alignment that cannot be secured in any other way. We find this construction superior on motors having a cylinder bore of 4" and over.

SCRIPPS MOTOR COMPANY, 5833 LINCOLN AVENUE, DETROIT, MICHIGAN

You know the value of Contours



When you order a hull built or buy a standardized boat you carefully study hull lines. You know that easy entrance and exit without suction makes all the difference between efficiency and inefficiency. Hyde was the pioneer in the study of propeller blade contours. When you purchase a Hyde Propeller you are buying more than Hyde Bronze. You are benefiting from over a half century of research and study in propeller efficiency.

Send for this free booklet "Propeller Efficiency." It will tell you why Hyde Propellers often increase the speed of a boat and always get home safely.

HYDE WINDLASS COMPANY
Bath, Maine

HYDE
PROPELLERS

Dealers everywhere carry ample stocks

the folds and carried the gear astern in a swirling boil.

"*Gott sei Dank!*" breathed the doctor, as the *Gotter* leapt forward with a swoosh, "und if ve can't roll, den ve yust schlides home like eine base-baller."

So he was back on *C* again — a somewhat subdued *C*, to be sure — yet of such effect that he rounded the next buoy in the very wakes of the fleet.

Then a reach again to the finish line and once more the willing *Gotter*, uncorseted to be sure, yet with a certain womanly relief at being freed from her stays, shot puff by puff to weather or looard of her striving rivals — it still mattered not — till at last she slid past the committee boat to the victory she so richly deserved.

"*Ach, danke,*" murmured the doctor quizzically as he was handed the bottle of questionable Old Tom. "Bud it wass a sort of skin game vot didn't go so good, und if you vill all gome op to mein Haus dis effening, I vill make you a real olt-fashioned bineapfel Bola, mit blenty of champagne. *Nicht wahr?*"

PUNKTUM!

\+ + +

The Salmon Boat

(*Continued from page 60*)

there was nothing which could stay with her. She gloried in a fresh breeze, and yet was remarkably good at ghosting along in light airs.

Under her original rig, she carried a huge jib with no club, which set outside the stays, and a long overhanging boom. One of her many owners had cut down her sail plan materially, which made her a bit easier to handle, but did not improve her speed. The change back to the original sail plan was always going to be made the next season, but was never accomplished. Finally, she was sold to a northern yachtsman who gave her a Genoa jib, a club topsail and an assortment of light canvas which would have shocked her contemporaries, and started out to make life a burden for his companions.

In a race around Santa Catalina, 67 miles, she and two others led the fleet home, all finishing within 300 feet of one another — and the other two were modern, 45-foot staysail schooners. A race from San Pedro to Newport saw the little 29-foot salmon boat second by six minutes to one of the 45-foot schooners, and comfortably ahead of an Eight-Metre, an "R," and several schooners and yawls. In the 132-mile race around bleak San Clemente, part of it in a gale of wind, she showed up well with schooners of more than twice her size. She went from the western end of Santa Catalina to the western end of San Clemente — a broad reach — at an average of 8.3 knots.

For cruising, there is much about the model to recommend it. The seaworthiness of the double-ender in general needs no ballyhoo to prove its claims. While it is true that the salmon boat will not lie as close to the wind as the more modern types, it is equally true that she is far less wearing on the nerves than the boat which slaps and pounds. You can forgive her for needing a two-acre lot in which to come about.

The accompanying rough sketches show the *St. Joseph*, a typical market fishing boat, and *Borrasca*, ex-*Butcher Boy*, which the writer sailed for more than a dozen years. There appear to be no accurate plans of the old models extant; the lines of *St. Joseph* were drawn from a model by Manuel Madruga, who built many of them and who now, as designer for the Campbell Machine Company, has turned out the largest of the modern Diesel-driven fishing vessels — such as the 135-foot *Mayflower*, which recently made history in the tuna-fishing game by cruising from San Diego to Christmas, Washington, Palmyra and the Hawaiian Islands, seeking new banks.

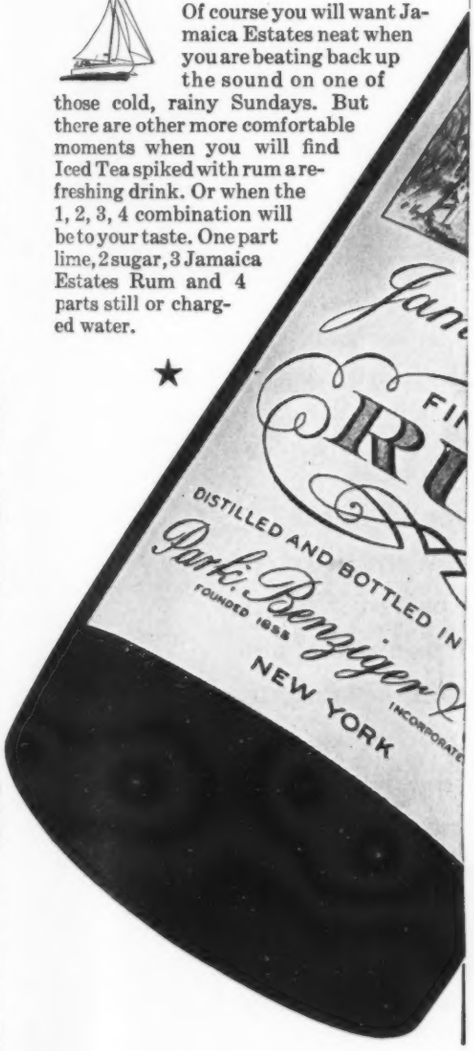
Write to Park, Benziger & Co., 24 State Street, New York, for the famous rum punch recipe of the New York Yacht Club's first Commodore. At Bar Harbor and Newport friends will flock to your boat, try to steal your steward . . . and surely steal your recipe for their parties ashore.

Off Montauk you will find Jamaica Estates useful. For the battle with a broadbill it will stay by you during the fight. That is because Jamaica Estates Rum is a pure pot-still product made from a sugar-cane mash. After landing the brute quite obviously you will need a pick-me-up. Neat or mixed, Jamaica Estates is quickly absorbed because of the natural affinity of the human body for sugar products.

Establish the reputation of your boat and its owner at the New London Boat Races. It's easy. Just slap together a delicious and authoritative Rum Punch.

Of course you will want Jamaica Estates neat when you are beating back up the sound on one of those cold, rainy Sundays. But there are other more comfortable moments when you will find Iced Tea spiked with rum a refreshing drink. Or when the 1, 2, 3, 4 combination will be to your taste. One part lime, 2 sugar, 3 Jamaica Estates Rum and 4 parts still or charged water.

★



With Outboard Motors Through the Jungle

(*Continued from page 58*)

I labored, swore, sweated, and blistered my hands trying in vain to start the thing. Drenched to the skin, I whirled the flywheel, changed spark plugs, adjusted the carburetor, drained the crankcase, and did everything that long experience and, so I flatter myself, an intimate knowledge of motors told me might solve the trouble — but without getting an explosion. And, then, without any apparent reason, the motor roared into activity at a touch of the flywheel. And it made up for its stubbornness later. For three weeks there was scarcely a day or an hour that it didn't pour, and the Evinrude never missed an explosion.

For several hours one day we were out of gasoline and ran on kerosene. On one occasion one of the men left a pair of duck trousers to dry on the boat's shelter. Suddenly the motor stopped with a jerk and, glancing around, I discovered that the breeches had blown down and had been caught and jammed in the flywheel. To extricate them the entire motor had to be taken down.

But the climax came when ascending the Abary River. The stream is fairly alive with alligators and when, with a terrific jolt and bump, the propeller struck some object and stopped, I suspected what had happened. A moment later a still struggling but mortally wounded ten-foot 'gator came thrashing to the surface, his backbone cut just back of the head as neatly as if with an axe. One propeller blade was twisted and bent, and the bronze quadrant for adjusting the angle of the shaft was snapped off. And there we were, miles from the nearest settlement, in the midst of vast, swampy savannas and with a useless motor on our hands. To make matters worse, three of the men had been sent on ahead in a small canoe to find a camping place. For the remaining three to paddle the boat against the current was impossible. In the midst of this dilemma, a solitary Hindu appeared, drifting down stream in a battered dugout. From him I learned that five miles across the savannas was a blacksmith shop. That was our only hope, and with my black boy shouldering the motor, we set out. Sloshing through knee-deep water, pushing through breast-high grass, devoured by myriads of mosquitoes, we tramped those awful five miles under a merciless sun only to find, when we reached the shack, that the smith was absent, the forge cold. But once again the devil was

★

A Service for Yachtsmen

Knowing that yachtsmen are exacting in their judgment of Jamaica Rum, we are bending every effort to make easily available to yachting enthusiasts a supply of clean, fragrant rum. For the convenience of rum lovers we are endeavoring to reach the yacht clubs and boating supply houses along the eastern seaboard.

Handy Suggestions

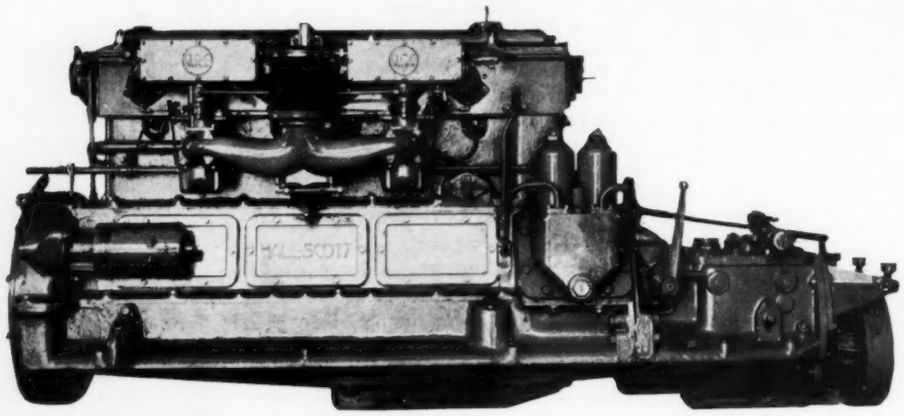
For the further convenience of yachtsmen we are also placing copies of Edwin Charley's booklet of recipe suggestions wherever Jamaica Estates is sold. Ask for your copy and stick it on the chart board against the time *when the sun is over the yard-arm.*

Jamaica Estates

Aged for 7 years in Government Warehouses

Distilled and bottled in Jamaica by Edwin Charley exclusively for Park, Benziger & Co., West Indian Merchants since 1855.

This advertisement is not intended to offer alcoholic beverages for sale or delivery in any state or community wherein the sale or use thereof is unlawful.



ANOTHER HALL-SCOTT INSTALLATION

Hall-Scott's long record of satisfactory service is the real reason behind the quite remarkable sales record Hall-Scott is making this season, particularly in units of 100 horsepower or more.

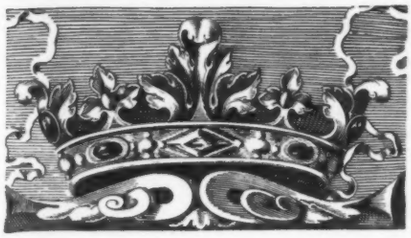
A typical installation of this character will be found in the 68′ A.C.F. motor yacht "Miramar", owned by Mr. J. B. Wathen, Jr., of Louisville, Kentucky. This yacht is powered with a pair of 175 h. p. Hall-Scott EXPLORERS equipped with 2:1 reduction gears, and giving a speed of 17 miles per hour at 1800 revolutions per minute.

There is a Hall-Scott engine available for every marine use from 50 to 550 horsepower. Write for detailed engineering data and for the *new* reduced prices on the entire Hall-Scott line.

HALL-SCOTT MOTOR CAR COMPANY

Division of American Car and Foundry Motors Company · 254 West 31st St., New York, N.Y.

BERKELEY, CALIF. · VANCOUVER, B. C. · LOS ANGELES, CALIF. · SEATTLE, WASH. · DETROIT, MICH.
IN MIAMI, FLORIDA, J. FRANK KNORR · IN NEW ENGLAND, MARINE EQUIPMENT CO., OF BOSTON, MASS.



Gentlemen, the King!

You'll feel better tomorrow if you stand by King William today. This mellow old Scotch whisky treats you royally and the price is only a trifle more. Ask for King William in the cafes; hope for it when you're a guest; serve it when you're the host. Every case is delivered from a U. S. Customs bonded warehouse.

JOHN GILLON & CO., LTD.
GLASGOW and LONDON
By Appointment to His Late Majesty King William IV

KING WILLIAM IV
V·O·P
SCOTCH WHISKY

Sole U. S. Distributor
BLUEBELL IMPORTING CORPORATION
Graybar Building, New York

This advertisement is not intended to offer alcoholic beverages for sale or delivery in any state or community wherein the sale or use thereof is unlawful.

driving and needs must. So, with Sam's help, I started the fire; while Sam labored at the wheezy bellows, I hunted about and found an old wagon spring, and between us we hammered and welded and forged out a very satisfactory quadrant. It was rough and clumsy but it did its duty nobly for nearly a year, carrying us along the jungle streams.

Wherever I have carried on jungle explorations I have found the outboard motor of the greatest help. With an Elto attached to the stern of a 25-foot dugout *cayuca*, I threaded the "drowned forest" of Gatun Lake, visited countless floating islands, and for months explored the shores of the lake. And another of my outboard motors saved the lives of a number of men and women. With this motor attached to a 30-foot lifeboat, and carrying nearly a ton of equipment and five men, I explored the coasts, ascended the jungle rivers and visited the San Blas Islands all the way from Madre de Dios to the Gulf of Darien. That so small a motor could drive so large a boat at such speed was little short of amazing. In good weather it made all of eight knots, and often we braved the heavy seas of the Caribbean.

When I had completed my work on the San Blas coast I presented the motor to Señor Mojica, the Panama commissioner at El Porvenir Island. It was mighty lucky for the Panamanians that I did so. Soon after I left, an ill-advised Indian revolt broke out. Several Panamanians were captured and killed, and the excited Indians started for Porvenir to wipe out the remaining white men. But friendly Indians had brought word of trouble and the terrified Panamanians tumbled into the boat I had left, started the motor and headed for Colon. The insurgent Indians were already in sight and gave chase in their swift sailing canoes. But even a San Blas canoe, handled by San Blas Indians — than whom no better sailors exist — is no match for a good motor. At last, finding it hopeless to overtake the fugitives, the Indians turned back.

Just prior to this little uprising of the Indians I had a visit from a Teguala chief whom I had employed when exploring the district.

The old fellow was in something of a quandary as to whether or not he and his tribe should join with the malcontents or remain peaceful, and he had come to Panama to ask my advice on the subject.

"Why do the Indians want to kill the Panamanians?" I asked him.

For a moment he hesitated. Then, with a grin, "We don't want to be civilized," he replied. "We want to live like the Americans!"

Three new ideas for the Yachtsman

We carry all the standard accessories and clothing for the Yachtsman, and in addition, all the smart or useful novelties we can find or create.

We present below three of these—each one a perfect gift for a yachtsman.

Hurricane Pipe

For the pipe-smoker who sails. No sparks can escape. A clean, cool, dry smoke—and quite economical due to slower combustion. Made from finest matured Bruyère. Three shapes. Each $7.50

Shockproof Shipmate Watch

Our famous waterproof watch. Will stand rough usage and give reliable time. Chromium Case, 15 Jewel. Shockproof. Radium dial and unbreakable crystal. $25

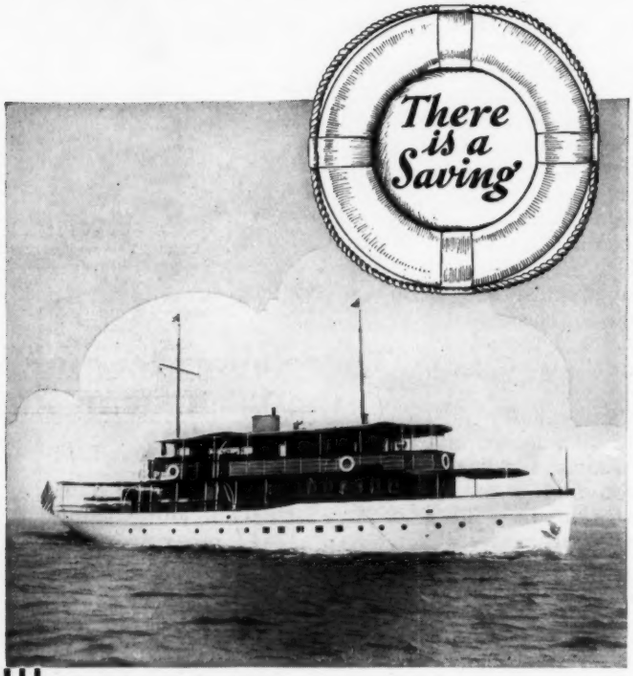
Atlantic Waterproof Yacht Timer

Our own design. Waterproof and accurate under all sea conditions. Reverse dial set in seconds; registering dial indicating 5-minute intervals for a total of 20 minutes. Chromium case, $18

Send for book "Play Hours"

ABERCROMBIE & FITCH CO.

The Greatest Sporting Goods Store in the World
MADISON AVENUE AT 45th STREET, NEW YORK
CHICAGO STORE: A&F
Von Lengerke & Antoine, 33 So. Wabash Ave.



There's a saving in insurance cost to yacht owners on an Atlantic Policy.

The Atlantic is a mutual marine insurance Company and shares its profits with policyholders. The present cash dividend rate of 15% means a saving of that amount on a yacht insurance premium.

The Company pays the regular dividend to all policyholders whether they have a loss or not.

Atlantic Mutual policies are non-assessable and afford the broadest coverage available.

Atlantic Mutual is the largest mutual marine insurance Company in the World and has a record of nine decades of prompt and equitable settlements.

Send for free YACHT "FACTS" booklet which gives further information.

ATLANTIC MUTUAL INSURANCE COMPANY

Home Office
Atlantic Building, 49 Wall Street, New York

Branch Offices

Boston, 33 Broad Street
Chicago, 175 West Jackson Blvd.
Cleveland, 1370 Ontario Street
Philadelphia, 401 Walnut Street
Baltimore, South and Water Streets
Washington, 1427 Eye Street, N.W.

----------Use Coupon----------

ATLANTIC MUTUAL INSURANCE CO. Y-6-34
49-51 Wall Street, New York

Please send me a copy of your yacht booklet "Facts" which gives detailed information regarding yacht insurance on your mutual plan. I understand it is free.

NAME_____

ADDRESS_____

CITY_____ STATE_____

As the Atlantic Mutual recognizes brokers it will be in order to send this coupon through your broker.

A North Sea Gale

(*Continued from page 65*)

At the consulate we found that we were entitled to rations but that they had no authority to cash checks. This was rather a shock, as it seemed likely that we might be stuck at the Hook some days and the regulation scale of living was probably not luxurious. The situation was saved, however, by the consul's finding that I had been in the same service during the war, when he kindly cashed my check at his own risk. Soon after returning to the Hook, a cable arrived to say that within the next few days a steam trawler would be sent to tow the *Primrose* home, and we settled down to an uneventful existence.

The steam trawler arrived at last, with a smack in tow, having called for her at Flushing on the way over. The smack looked a wreck; her mizzenmast was gone, and topmast, too, while her decks were filled with sails and broken spars. Several planks were missing from the bulwarks and she had a heavy list to starboard.

Next day we set off for Lowestoft, having a lovely passage over in a glassy calm, and arrived without incident to go into dock for repairs.

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The Isle of Enchanted Legend

(*Continued from page 35*)

the harpoon straight down through the back and it held. The bat was now tiring rapidly, and his thrashing grew less and less violent. Finally, we got him under tow for home at slow speed. He fought every inch of the way and saved up a lot for the grand finale.

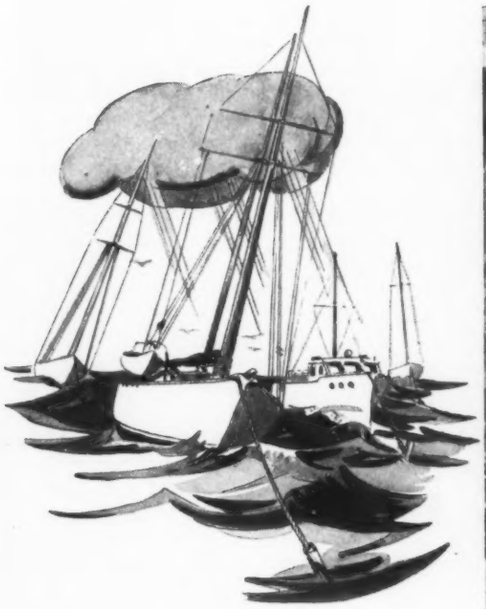
As we neared the *Samona II*, the mess boy and the cook came out to meet us with the skiff and outboard motor. W. J. sent them back for more heavy line. This he made fast to our harpoon lines and instructed them to take the other end in through the surf and make it fast to the large rocks on shore. We had no sooner passed them our lines and cast off, than the old devil came to life with a vengeance. He started off to sea again with the culinary department in tow and screaming wildly for help; the 16-horse power outboard offered little or no resistance to his seaward rush. We had to speed after the skiff and take the lines again. Now he started making fast, circular rushes again; a leaping, thrashing final effort to get loose from that thorn in his side. Twice he dashed away with both boats in tow, knocking the outboard around like a cork, filling it with water and twisting our lines into an impossible mess. Finally we had to run the launch aground to get the lines ashore. For five hours we had battled and it was a relief when, with block and tackle, we hauled him well in with the aid of the surf.

Sharks swarmed in the surf and we had to shoot them and drive them off with clubs until the tide receded, leaving our specimen high up on the beach.

Disappointment engulfed us when we found that, while the bat was an exceptionally large specimen, he was not the rare fellow we were seeking. He measured twenty-one feet across his great, triangular wings, sixteen feet from nose to tail, and nearly three feet in thickness at his back, and weighed over two thousand pounds.

After the intense excitement of the capture had subsided a bit, we began to realize that Albert, Captain Clark, Bill the mate, and Darby, who had set out in the other launch at the same time as we, were nowhere to be seen. The culinary department enthusiastically informed

"There is no Rope like Plymouth" WHEN THE REAL TEST COMES



William Fuller, Inc., expert sailmakers, prefer Plymouth

The firm of William Fuller, Inc., sailmakers and riggers of City Island, N. Y., has made sails and rigging for such famous racing and cruising yachts as the "Dorade", "Mistress", "Narwal", and for the famous schooner, "Black Douglass." The Superintendent, G. W. Valentine, known for his insistence on rigging of the highest quality, says . . . "There is no rope like Plymouth. Since the founding of this business we have been using it, always to the satisfaction of our customers." Expert riggers, sailmakers and boat builders agree that the quality of Plymouth makes it the greatest rope value you can get for your money.

There is nothing sporting for the boat owner in taking a chance on rope. When the real test comes on the water, when your family's safety may depend upon the strength of your ground tackle or rigging, you must have rope you can depend upon.

Outfitting time is here. Make a careful inspection of halyards, sheet rope, anchor warp, mooring lines and dinghy lines. If there is the slightest doubt about their condition replace them.

Replace them with Plymouth Rope; either Ship Brand Manila, Bolt Rope or Manila Yacht Rope as your requirements and preference may call for.

When the real test comes, "There is no rope like Plymouth", for strength and dependability. With good reason it has been selected for use on International Cup Defenders. For sound reasons leading riggers recommend it and use it on their own boats. It has earned the name of "The Rope You Can Trust."

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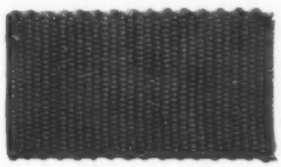

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Plymouth offers netted Rope Fenders of Ship Brand Manila in four different styles and a variety of Ship and Yacht sizes. Bags are made from heavy cotton duck, strongly stitched and cork filled.

Also the new "Cop-painted" Mooring Line which comes spliced, parceled and served with thimble ready for use in whatever length and size your requirements may call for.

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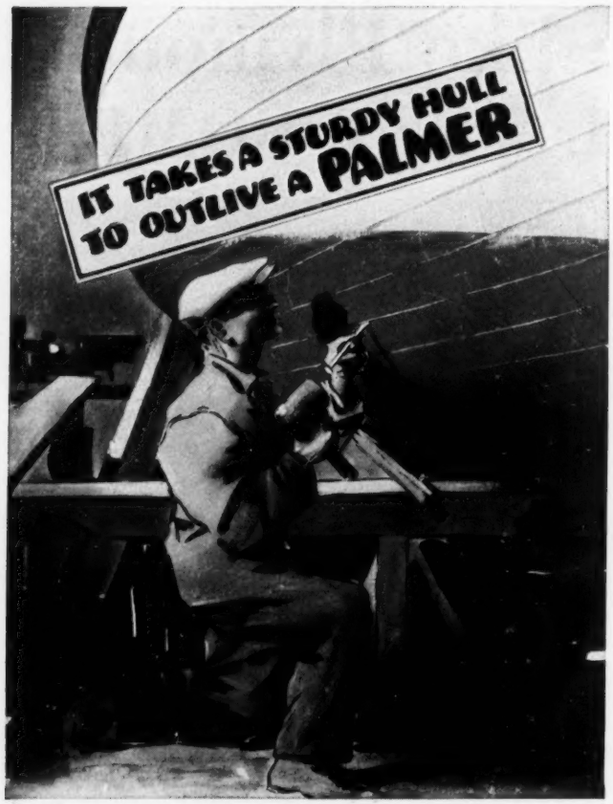

We older men remember those yard-built hulls framed with natural knees, seasoned lumber double planked and days-time fastened, hulls sound as a dollar after ten, fifteen or even twenty years. They rarely outlived more than one or two Palmer Engines. Then habit of or need for changing engines every two or three years was undreamed of. Palmer Engines are available today with the same sturdiness and stamina. They are higher speed and more compact to meet modern requirements but they have long life built right into them.

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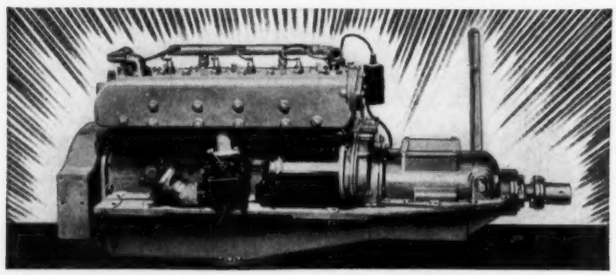

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us that this quartette had also harpooned a bat shortly after our fight began. We immediately put back into the heavy seas to find the other launch and crew.

A heavy tropic downpour cut the visibility to a hundred feet — when it rains at Cocos the skies simply open. As soon as it cleared a bit we headed east into heavy seas. Eight miles out we stopped and scanned the horizon with the glasses. Far to the southeast, we saw the launch for a moment as it crested a large comber. Waves broke over our boat and we had to pump continually to keep the water away from the engine. Slowly we made our way toward them. When we arrived, it was evident that they were sorely in need of assistance. Their boat was badly battered; one harpoon had been broken off, the line had parted on another when it became entangled around the propeller; the big hook with which they had hoped to tow their catch home had been straightened out until it looked like an ice pick. A large gaff made fast to a line was the only connection which they now had with the bat and he was fighting furiously. They asked for more lines, a harpoon — anything we had. We threw them another gaff and line, and watched while they hooked and lost him three more times. Every time they got him close to the boat they whaled him with clubs, bars, engine crank and pieces of the floor. Eventually they got him in tow and we started the long, slow trip back to the shelter of Chatham Bay. Soon, however, they yelled for a tow — their motor quit when they allowed the water to get up to the carburetor. And so, amid heavy seas, a strange procession danced along — one battered launch towing another battered launch which, in turn, towed a sea bat, escorted by dozens of sharks. It seemed an eternity before we gained on the island.

Frigate birds, gonies and other sea birds followed along to pick up any stray pieces that the sharks missed. The birds of Cocos are extremely tame; they have encountered so few human beings that they are absolutely without fear. When we were trolling, the frigate birds continually carried our lures into the heavens, only to drop them on our heads. Gonies and other small birds came and sat beside us in the launch. One species of shearwater sat right on our fish poles; sometimes too, they nestled into my hair, clucking contentedly as if to say: "What a lovely imported domicile." But when they turned my hair into a battlefield I had to remove the cause. Seemingly in want of companionship, they sat on our arms and shoulders, chirping a solitary note that was in keeping with their lonely habitat.

Our second disappointment put in its appearance when we beached the other bat only to find that he was of the same species as ours. However, we had gained a bit of experience which would enable us to make an easier capture of the specimen which we sought.

What great creatures these bats are! They seem like prehistoric monsters from the age of pterodactyls. Their great wings are covered with a membrane far superior to leather in strength and protection.

Day after day we searched for that particular sea bat of our choice, but after patrolling miles of open ocean and sheltered water, we were forced to give up — for the present. Todd, the steward, and I had dug up the island with our shovels, but no doubloons or buried chests were encountered in our endless excavations. We did find that the ducks and chickens turned loose on the island by a certain yachtsman were doing well in the wild state and resented our intrusion.

"Heave awash!" called the mate, and from the cliffs the echo came back like a lusty encore from the ghosts of buccaneers long vanquished. Cocos fades back into its mantle of dripping heavens — we sail the Pacific for old Panama.

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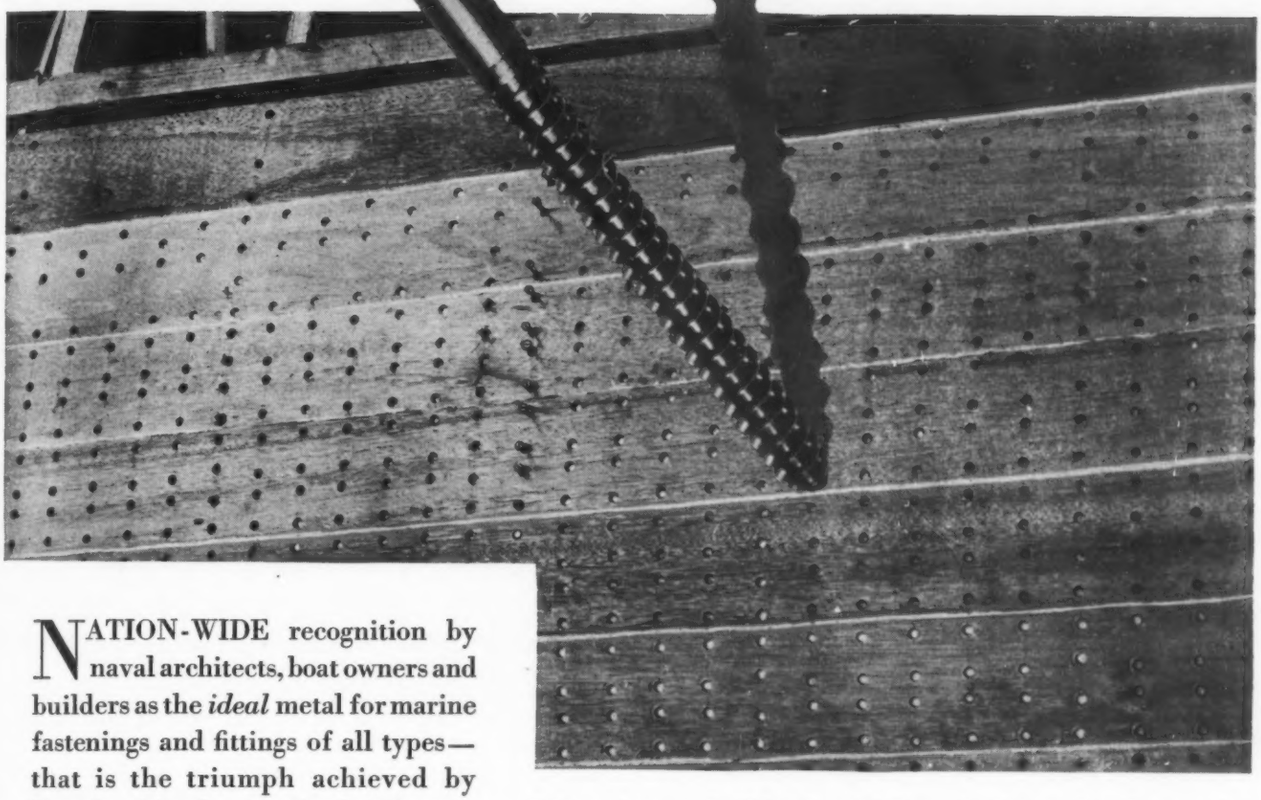
strong...tough...corrosion resisting



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EVERY boat owner needs "Afloat with Edison Batteries". It's full of information—and pictures. Send for your free copy right now!

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Protests vs. Common Sense

(*Continued from page 30*)

which there was better feeling between the crews. We learned the rules almost word for word, and how they should be applied. We soon found out that if we wanted to take chances we could do so, but if the protest was sustained and we were thrown out, what did it really matter?

Almost everyone who has done much racing can recall at least one or more classes which were broken up because a few "cup hunters" were racing. I am not referring to the man who is crooked, because he is as rare in yacht racing as he is in every other sport. But the skipper to whom I refer is the man who wants to win so badly that he insists on exercising his rights at all times, and who insists on living up to the letter of the rules, regardless of conditions. He will protest on any excuse, and if he is protested he will fight as if his honor were at stake. That man should not go into yacht racing. To most of us the racing of sailboats is a sport; the finest sport ever conceived, and every one of us who has a son hopes to see him follow us and carry on, long after we are gone, what we believe are the traditions of yacht racing.

\+ + +

American Dinghies Win in Bermuda

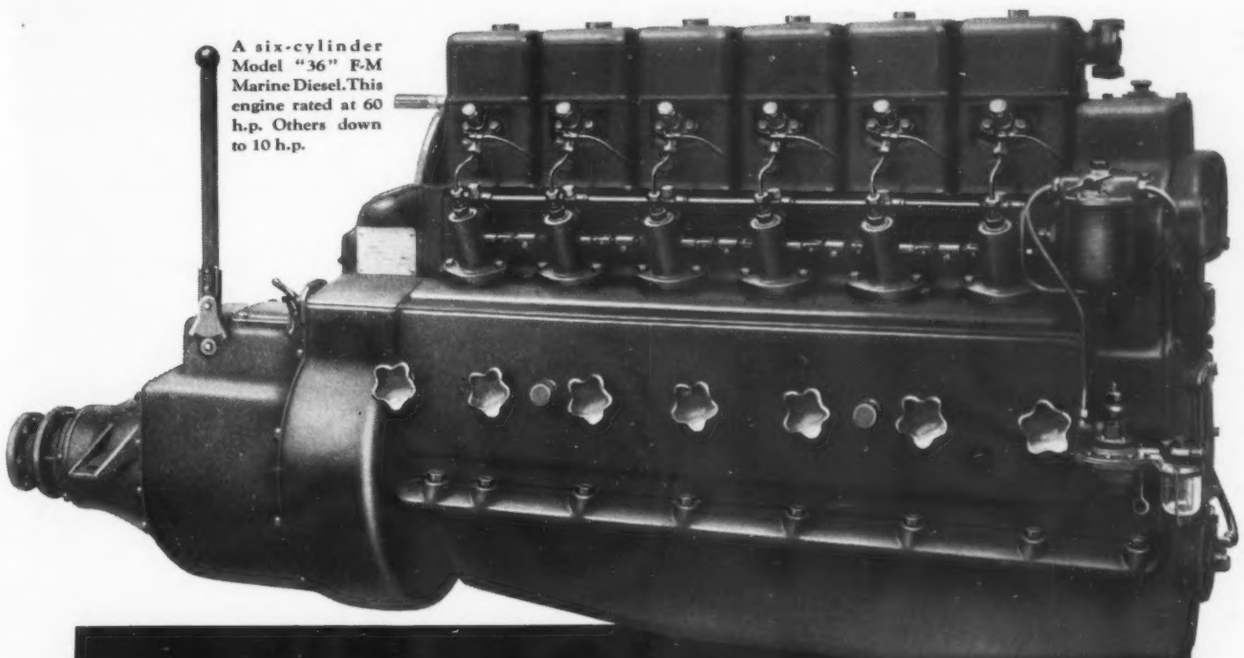
(*Continued from page 54*)

though the Americans had won the first event quite handily, but *Kerchoo* was disqualified on a protest by *Ripple* for having tacked too close, giving the Bermudians the contest by a score of 19 to 16¼ points, the boats finishing in the following order: *Fanny Dunker* (U. S.), *Puddle Duck* (Ber.), *Liza* (U. S.), *Skipper* (Ber.), *Ripple* (Ber.), *Midget* (Ber.), *Fifi* (U. S.), *Kerchoo* (U. S., disqualified). There was a gap of four minutes between the first and last boat.

The second race was much closer, the Bermudians holding the Yankees to windward, beating them a shade reaching, but losing a bit on the runs. Only two minutes separated the first and last boat, the Americans finally winning by a score of 19¼ to 17 points, the order of finish being as follows: *Fifi* (U. S.), *Puddle Duck* (Ber.), *Fanny Dunker* (U. S.), *Ripple* (Ber.), *Midget* (Ber.), *Kerchoo* (U. S.), *Liza* (U. S.), *Skipper* (Ber.).

The third and fourth races were held the next day in the same southerly breeze, which had strengthened considerably and was not nearly so fluky. The American skippers got right down to business and cleaned up both races and the series, the score in the first contest being 25¼ to 11, and the second 25¼ to 10. *Ripple* withdrew from the latter event after fouling the first mark. It was expected that the Bermudians would do their best work in the stronger breeze, but the opposite was the case, the Yankee dinghies cleanly outsailing their opponents both to windward and running, the Bermudians being unable to appreciablygain reaching. The order of finish in the third race was as follows: *Liza* (U. S.), *Fifi* (U. S.), *Fanny Dunker* (U. S.), *Midget* (Ber.), *Kerchoo* (U. S.), *Ripple* (Ber.), *Skipper* (Ber.), *Puddle Duck* (Ber.). The fourth and deciding race was finished in the following order: *Fifi* (U. S.), *Fanny Dunker* (U. S.), *Liza* (U. S.), *Midget* (Ber.), *Kerchoo* (U. S.), *Skipper* (Ber.), *Puddle Duck* (Ber.), *Ripple* (Ber., withdrew). There were gaps of five and ten minutes between first and last boat in the third and fourth races, respectively.

Bermudian hospitality was at its best during the



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NOW comes to marine service a new engine with an old name. Years ago, this company started with the crude Diesel engines of that day and has ever since been the largest factor in the progress of the Diesel-making art on the American continent.

Today the engineering and service facilities of their organization are unequalled in extent and scope. This new lightweight engine from 10 to 60 horsepower, is the highly engineered product of these huge research and manufacturing facilities.

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your triumphs, forget your defeats. Keep a case aboard always—

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series, assuring another American invasion either this fall or next spring. A few minor changes in the British-built dinghies are expected to put them on a par with the American craft, so that in the future the racing for the handsome challenge cup should be closer and more interesting.

+ + +

Learning to Sail In Small Boats

(*Continued from page 44*)

push the bow into the wind and give her a weather helm.

The harder it blows, the more this is felt, for with the increasing breeze the angle of heel and the one-sidedness of the bow wave increase. Then, too, as the boat travels faster, the size of the wave and the pressure it exerts against the bow grow greater. Figure 8 shows two dinghies in action, and the boat in the foreground illustrates the point clearly. The wave is almost entirely on her lee bow and the tiller is being held up to overcome the weather helm.

What is the cure? There is only one, and that is to "hike," placing all weight to windward and keeping the boat on as even a keel as possible. It is not a matter of keeping the boat right side up but, when the boat is on an even keel, the bow wave forms equally on both sides and is balanced. The greater the angle of heel, the greater the weather helm. There is only one answer: Keep her on her feet! Lean out to windward. Get as much of you outboard as you can. Rig "hiking ropes" inside the boat to hook your toes under and then hang out till your stomach muscles ache and you think your back will break. It won't, and the boat will go faster.

In Figure 9 is shown an example of what a slight difference in angle will do. In the leading boat, the crew is hiking way out. The boat is standing straighter, pointing higher, and traveling faster. Part of the bow wave is seen to windward, helping to balance the larger wave on the lee bow instead of leaving this all to be done with the rudder. The second boat has a greater angle of heel and much less wave to windward, meaning much more on the lee bow.

While the beneficial effects of "hiking" are most apparent in beamy little boats where the weight of the crew represents a fair proportion of the total weight, yet all normal boats, both keel and centerboard, will move more easily while on their feet than with their rails buried. So it is important to hike in any boat whose trim can be even slightly affected by the weight of the crew. A Star, for example, sails noticeably better to windward in moderate to fresh breezes if she has a heavy crew sprawling out along the weather rail, the weight as far outboard as possible.

The foregoing holds true for boats close hauled and reaching, but in running dead before the wind a different condition exists. In Figure 10 the sail is broad off and the *CE* is out to one side. The natural result is a tendency to turn the boat — weather helm again. Now, however, the boat is on an even keel and there is little or no effort required to keep her upright. Under these conditions if, by shifting weight, the boat be heeled slightly to windward so that there is a little more bow wave formed on the weather side, it will counteract the push of the sail which causes the weather helm. As a stunt, it is quite possible to steer a boat off the wind in light air by increasing and decreasing her list to windward. The only time it is advisable to heel the boat to leeward is when the air is so light that the sails keep slatting with every slight motion of the boat. It is then often possible to make them lie quietly, or sleep, by giving the boat a slight list to leeward.

SENSATIONAL HOODED POWER - - *Exclusive*

ENGINES floated in RUBBER - - *Exclusive*

RUBBER floated CO-PILOT - - *Exclusive*

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UNDERWATER SILENCING on all models

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GREATEST *Certified* HORSE POWER per lb. of weight

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Nine show-down values that give you the real low-down on outboard motors this year!

ONLY EVINRUDE AND ELTO offer sensational new Hooded Power . . . with new-type engines all-enclosed and quieted . . . and boat and hands kept spotlessly free of gas and oil. Only a Hooded Power motor can give the famous "sailing ride" . . . *wind-driven smoothness* . . . with every trace of vibration floated away in mountings of live rubber.

ONLY EVINRUDE AND ELTO offer Co-Pilots *floated in rubber* —a new-type steering device that entirely absorbs annoying tiller-shake—faithfully holds the course that's set—frees the skipper's hands for other tasks.

ONLY EVINRUDE AND ELTO offer the new Simplex Starter, unquestionably the greatest advance in manual starting ease in the entire history of outboard invention. No starting cord to coil and re-coil. Nothing to do but snap back on the starter grip. Hundreds-of-thousands of tests have proved it faultless.

ONLY EVINRUDE AND ELTO offer the silent Spiral Drive—costly, but durable, quiet, efficient. And Evinrude and Elto offer modern underwater silencing on *every* model, including their lightest, lowest priced motors.

More power, higher speeds, fewer pounds to carry

Excess weight is as old-fashioned in an outboard motor as in a modern motor car, train or aeroplane. . . . Constant, unstinted engineering development under the personal direction of Ole Evinrude...advanced construction including the internal, gearless rotary valve that increases horsepower as much as 27%...account for the highest certified horsepower-per-pound-of-weight ratio in the entire outboard field.

Finest metals for each part and precision manufactured in every detail—dependable, sturdy, long-lived—no outboards ever built can outrun them or outlast them!

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From the nine Evinrude, nine Elto models there is a motor that exactly fits the power, speed and service requirements of every outboard boat.

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This advertisement is not intended to offer Teacher's Scotch Whisky for sale or delivery in any State wherein its use is unlawful.

Bang!
Goes the Starter's Gun

(*Continued from page 70*)

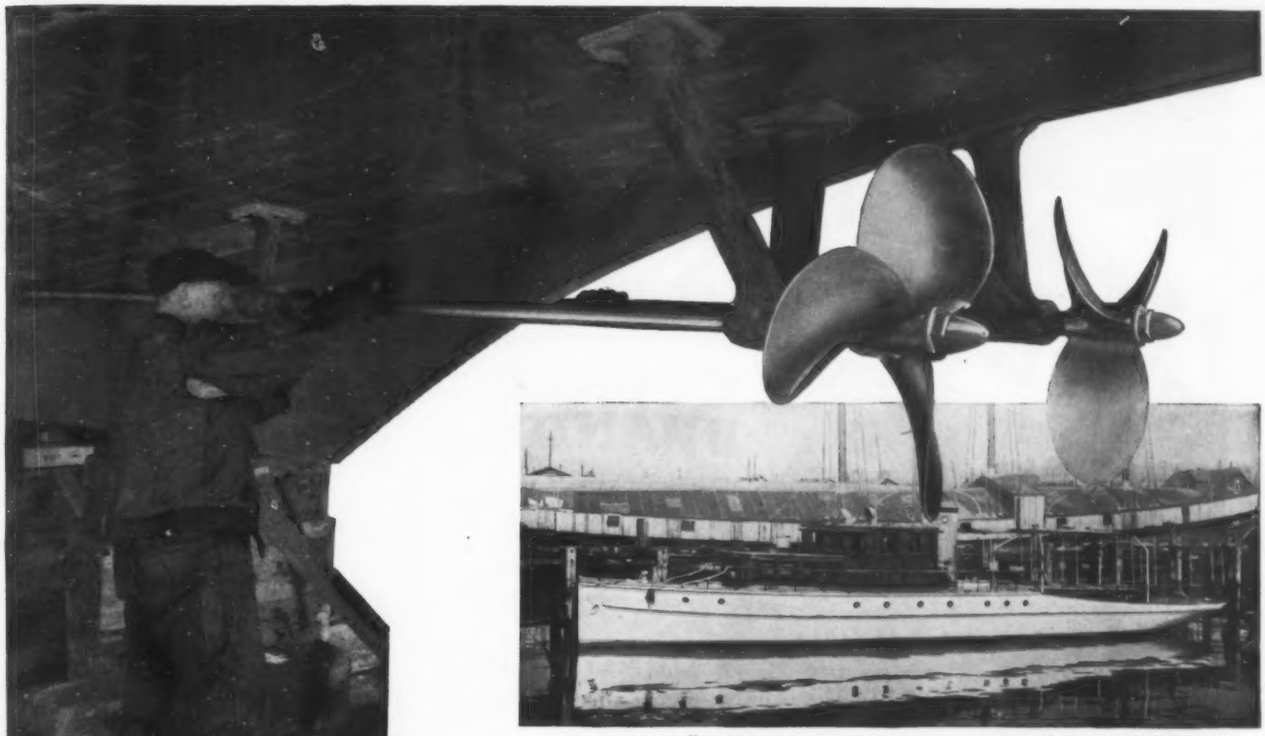
of specifications and rules for an international type of husky 30-foot, 300 horse power runabout which several American builders have promised to build. The Count is planning on two international regattas a year, one in March at Palm Beach, the other in August at Cannes. His plans, however, go beyond that. He is now in Europe rounding up most of the available royalty and nobility to serve on the European Board of Directors of a new organization, the Motor Yacht Club of America, about which more later. He insists, too, that all the activities he sponsors shall be in harmony with the International Motor Yachting Union.

After the Florida event there was much talk of several American motor boat enthusiasts building 12-litre boats for the development of further international racing. This talk has since quieted down. Even if the inclination still lives, I do not know what these people would use for engines. So far as I can see, there is no engine available in this country suitable for a real 12-litre racing boat to compete against the light-weight, amazingly fast, well-driven, reliable, and inexpensive machines of the Italians. In Mr. Mussolini's country, motor boat racing is making great headway and the Italians now hold practically all the motor boat records except the one big unlimited record monopolized by Gar Wood.

There will be no Harmsworth Race this year and it is my guess there will be none for at least three more years. Scott-Paine, who put up such a marvelous show last year, simply cannot get the Rolls-Royce engines he needs to make proper competition for the Gray Fox of Algonac — and I doubt if he will ever get them. I have a hunch it will take at least three years for new British interests to get thoroughly soaked with Harmsworth enthusiasm, acquire the appropriate Rolls-Royces and really tackle the job.

In the meantime, our heavy, out-of-date Gold Cup boats, which can never be revised enough to be serious competitors of the Italian 12-litre craft, will have a lively season among themselves, with a grand Gold Cup regatta at Lake George and the National Sweepstakes affair moved to Baltimore for a resumption of one of the greatest regattas ever held in this country.

I don't know what will happen to outboard records this year. I expect the new international Class X en-



The U. S. M. V. "Siwash" operated by the U. S. Commerce Dept., Bureau of Navigation and Shipbuilding Inspection. This craft is 78 ft. long and is powered with 2 Model B 115 H. P. Speedway engines turning two Monel Metal propellers 32" x 34" through Monel Metal shafts of 2" diameter. Fresh water tanks on this vessel are also made of Monel Metal.

Motor boat "Siwash" showing two 32" diameter 34" pitch Monel Metal propellers recently installed at Marine Basin, Brooklyn, N. Y. Propeller shafts also are of Monel Metal.

Maritime "Traffic Cop"

OUTRIDES TROUBLE...

on Monel Metal propeller shafts and propellers

FROM Maine to Jersey the U.S.M.V. "Siwash" chases maritime wrongdoers. Even operating at night causes her small fear of the menace of driftwood. Her trust is in Monel Metal propellers and propeller shafts.

Tender demonstrated advantages

She learned the advantages of Monel Metal from her speedy 18 ft. tender. This tender sometimes chases a law breaker right to the beach. Old-type shafts and propellers frequently got bent... requiring on occasion, changes as often as twice a day!

Then five years ago the tender was equipped with her first Monel Metal Propeller Shaft. Today that shaft is as straight and true as the day it went in. And the Monel Metal propeller installed last summer still bears no sign of damage.

So last winter the "Siwash" herself was equipped with two 2" Propeller Shafts and two 32" x 34" Propellers, all of Monel Metal.

Propeller shafts of Monel Metal are tough and stiff. They remain true and rigid against blows that would ruin the softer and weaker metals.

They are rust-proof, highly resistant to corrosion and "polish-in" to a glassy smoothness, reducing friction, vibration, wear and power losses.

On new boats and for replacements, many owners are now writing "Monel Metal Propellers and Propeller Shafts" into their specifications. And by no means are they ignoring Monel Metal for galley equipment, hull fastenings, bright work, fresh-water tanks, tiller rope, and other accessories.

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MONEL METAL *Propeller Shafts and Propellers*

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In every language, in every clime, Three-Star Hennessy stands for quintessence of quality in brandies. In the clubs of Mayfair, in the smart hostelries of Rio de Janeiro, in the sidewalk cafes of Paris, in Cairo, Shanghai, even in far away India, Three-Star Hennessy is respected both for its old traditions and its flawless quality.

★ ★ ★

Sole Agents for the United States . . . . Schieffelin & Co.
22 Cooper Square, New York City. *Importers since 1794*

Write for free recipe book

This advertisement is not intended to offer Three-Star Hennessy for sale or delivery in any State wherein its use is unlawful

gines will get their first real baptism of speed and the end of the season will see close to 70 miles an hour chalked up for George Coleman, Horace Tennes, Walter Everett or one of the other boys who are toying with these new outboard monsters. While the Italians hold all but one of the official world's outboard records, it means little. The American records exceed the world's records by wide margins, but the domestic speed merchants have simply not been interested enough to pay to have the A. P. B. A. apply to the I. M. Y. U., through its representative, the Yachtsmen's Association of America, for recognition of their records.

In the inboard classes we may expect new records with the 125 hydroplanes, the debutante 225's, the Gold Cup boats and some miscellaneous runabout classes. With the one record that really counts, the unlimited hydroplane speed of the world — now 124.86 miles an hour held by Gar Wood and *Miss America X* — there may be something stirring this year as well. I have an idea that Gar will make an effort to boost this mark during the Labor Day week-end at Detroit. The Motor City, having lost the Gold Cup and with no Harmsworth event for the current season, will need something stirring to stimulate interest in the annual marine festival. Commodore Wood always obliges when something new is desired and "129 miles an hour" flashed throughout the world from Detroit would be highly desirable from several standpoints.

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"Vema" Changes Owners

THE three-masted auxiliary schooner yacht *Vema*, ex-*Hussar*, was recently sold for the owners' syndicate to G. Unger Vetlesen. *Vema* is 202 feet 6 inches over all and was built in 1923 for Edward F. Hutton from designs by Cox and Stevens. The sale was made through Sparkman & Stephens. Captain James P. Barker, late of the famous ship *Tusitala*, has been appointed to command her.

Last year *Vema*, under sail and power, ran from Montauk to Bishop's Rock Light in 10 days, 10 hours and 22 minutes, breaking her 1932 record of 10:21:05. The best day's run on the 1932 passage was 308 miles, at an average speed of slightly better than 12.8 knots. Last year she hung up a total of 320 miles for the fastest day's run, a fraction more than 13.3 knots. In the summer of 1932 *Vema* covered 14,306 miles and last summer, 8,887 miles.

A BOAT TO BE PROUD OF...

AT A PRICE WITHIN REASON

This A.C.F. 39 twin-screw cruiser is one of the most satisfactory and best-liked designs yet evolved. Equipped with two six-cylinder 105 h.p. engines, giving 22 miles an hour, it makes a remarkably attractive boat. There are comfortable cruising quarters for seven. Two toilets. Ample lockers. Price, in the water at Wilmington, Delaware, $10,400.

Enjoy the 15th International Yacht Races off Newport this Summer from your A.C.F. "39"

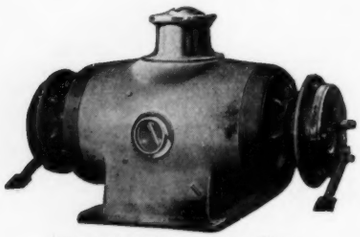
AMERICAN CAR AND FOUNDRY COMPANY

• • • 30 CHURCH STREET, NEW YORK, N. Y. • • •

Sales and Service Station: Foot of Fordham Place, City Island, New York

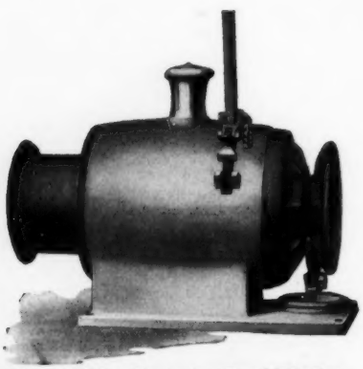
AECO

The Mark of Distinction



Type "G" Electric Windlass

WINDLASSES BOAT HOISTS
SAIL HOISTS STEERING GEARS
DAVIT WINCHES ANCHORS



Type "J" Double-Acting Hand Windlass

A TYPE AND SIZE FOR ANY BOAT THAT NEEDS ONE

Ask your boat yard for particulars or write for literature

AMERICAN ENGINEERING CO.
2432 Aramingo Avenue
Philadelphia Pennsylvania

Speed Possibilities—And Some Probabilities

(*Continued from page 41*)

the slight loss in efficiency. I have designed a number of hulls using surface wheels and they have always given most excellent results. It is possible that we may make some advance through their use. However, they do present very trying problems in steering and also in the actual making of the propellers to stand the repeated shocks as the blades enter and leave the water.

An idea which has always fascinated me for high speed propellers is shown in the sketch, Figure 8. This is the general idea only; details must be worked out by whoever is foolhardy enough to undertake it. The crankcase and cylinder assembly of a radial engine is coupled to a hollow shaft carrying a propeller at its after end. The crank of the engine is connected to a second propeller through a solid shaft running inside the hollow one. One propeller is right hand, the other left. The whole engine rotates in large ball bearings, crank shaft turning one way, cylinders and crankcase the other. The torque reaction of one propeller is exactly balanced against the torque reaction of the other. The limiting speed, on account of centrifugal stress of the rotating cylinders, is probably about 1200 r.p.m. for each propeller which is equivalent to 2400 r.p.m. if the cylinder block were held fixed and the crank only rotated. There is no torque whatsoever on the hull or on the engine bed. How the mixture is to be introduced into the rotating cylinders and the exhaust taken off is more than I can say. The two propellers, however, would work because that has been proved through their application to the torpedo where two propellers in tandem, one right hand and one left hand, are standard practice.

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The Hudson Takes Its Toll

(*Continued from page 47*)

first of the Class F boats arrived. She was a home-made hull built by her owner-driver, the 57-year-old Fred Travis of Peekskill, N. Y. Though not a step boat, she had been accepted for Class F and finished when the faster hydroplanes did not. Two of these racers capsized near the start, one finished after the time limit, and the rest gave out along the course.

The summary follows:

ALBANY-NEW YORK RACE, MAY 13, 1934, 132¼ MILES

Driver	Home Port	Class	Finish	Elapsed Time	Speed
C. H. Johnson	Cranberry Lake, N. J.	C-I	10:38:53	2:59:38	44.2
Ted Roberts	New York	A-II	10:45:12	3:45:12	35.9
Clayton Bishop	Onset, Mass.	B-II	10:51:05	3:37:23	36.5
Joel Thorne	New Rochelle, N. Y.	C-I	10:57:48	3:18:33	39.9
Leon Rogers	New York	C-II	11:08:32	3:29:17	37.9
Fred Jacoby, Jr.	North Bergen, N. J.	C-II	11:11:45	3:32:30	37.3
Dick Giersch	Glen Ridge, N. J.	C-I	11:19:10	3:39:55	36.1
Philip Peterson	Larchmont, N. Y.	C-I	11:36:09	3:56:54	38.5
Gar Wood, Jr.	Algonac, Mich.	A-I	11:51:38	4:51:38	27.2
George Plungis	Linden, N. J.	B-I	11:53:00	4:39:18	27.9
Adrian Habben	Paterson, N. J.	C-II	12:16:32	4:37:17	28.6
G. H. Fink	Queens Village, N. Y.	E Rbt	12:33:05	4:18:05	30.6
Arthur Baldwin	Freeport, N. Y.	E Rbt	12:38:47	4:23:47	30.0
Ken MacKenzie	New Haven, Conn.	C-II	12:56:32	5:17:17	25.0
Walter Wright	Ogdensburg, N. Y.	C-I	1:26:38	5:47:23	22.8
Clinton Ferguson	Waban, Mass.	A-I	1:50:05	6:50:05	19.2
Gordon Orstadt	Niagara Falls, N. Y.	C-II	2:06:30	6:27:15	20.5
Fred Travis	Peekskill, N. Y.	F-I	2:19:00	6:16:50	21.0

Johnson captured the Haynes-Griffin Trophy for the first boat to finish, the Jules Heilner Perpetual Trophy and the Lew Franco Trophy for the first amateur, the Ed Wynn Trophy for the first Middle Atlantic Outboard Association driver, the Motorboating Trophy, the Jacoby Trophy, and Class C amateur. Roberts took the Class A-II (professional) prize, the G. H. Townsend Trophy for the second to finish and the Vincent Rossignol Trophy for the first Manhattan driver. Bishop won the Class B professional. Gar Wood, Jr., took first place in Class A amateur.

ALLY OF AFTERGUARDS!

To racers Bermuda-bound . . . to Cup Defender afterguards . . . to yachtsmen the nation over, Smith Paints, Varnishes and Enamels are dependable allies in creating and maintaining the utmost in durability and beauty of finish. There is a time-tested Smith Quality Finish for every requiremeet.

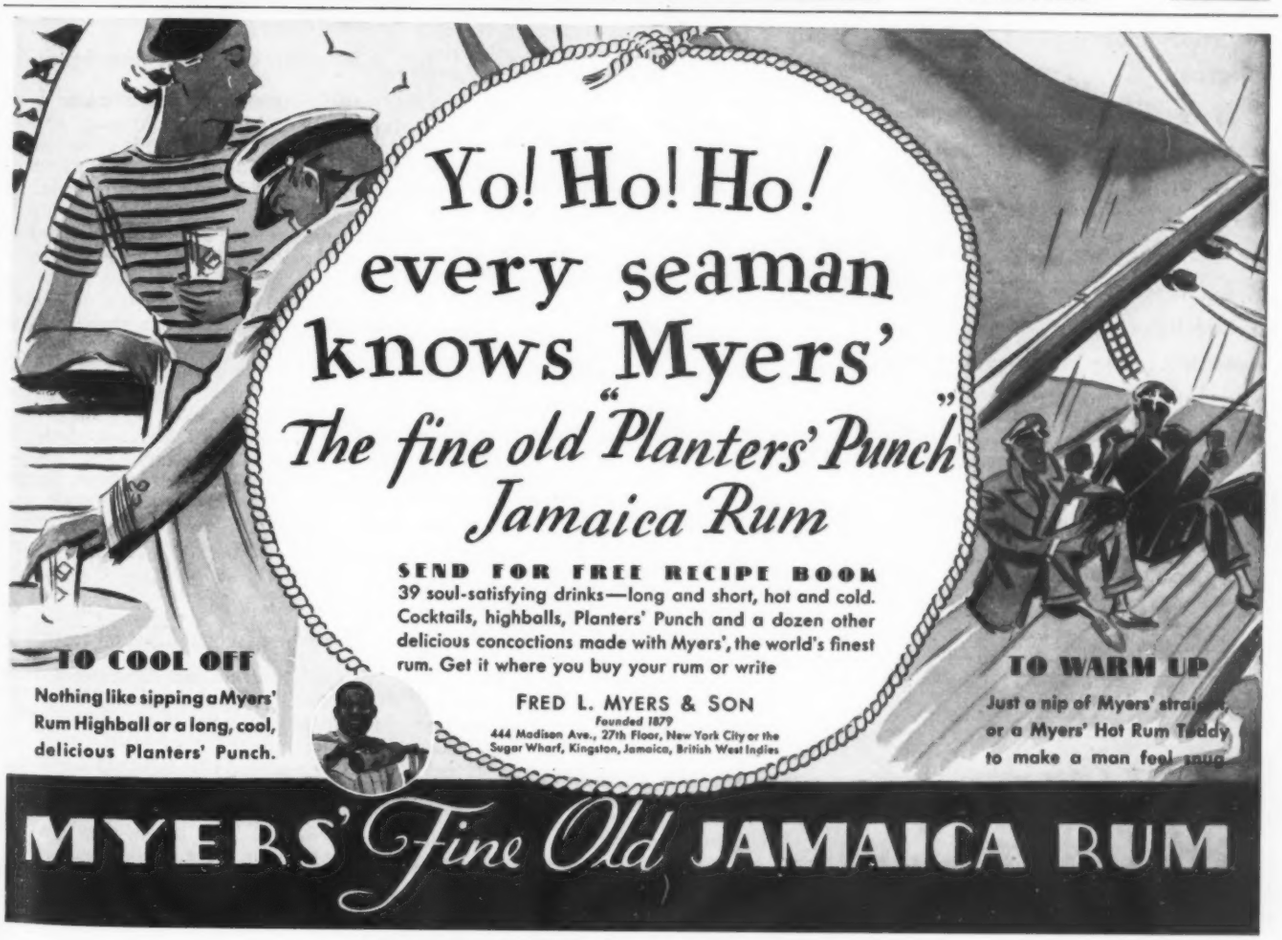
FOR SPARS — Spar Coating
Aquatite Varnish
BX-127 Marine Varnish
FOR STAYS, SPREADERS, ANCHORS, ETC.
All-purpose Aluminum
FOR DECKS — Yacht Deck Buff
Yacht Deck Green
Aquatite Varnish
FOR CABINS, HATCHES, COAMINGS, RAILS, ETC. — Aquatite Varnish
(Cabin Enamels for interiors)
BX-127 Marine Varnish
FOR ENGINES — Engine Enamels
FOR TOPSIDES — Yacht White
Yacht Black
FOR WATERLINES — Boot Topping in Green, Red, Black and White
FOR BOTTOMS — Herreshoff Bristol Green (anti-fouling)
All-purpose Bronze (anti-fouling)
Hard Racing Finish
Fisherman Red (anti-fouling)

TIME WILL TELL — EST. 1827

Reliable dealers everywhere can supply you. Insist on Smith Cup-Defender Finishes — There is no substitute for 106 years of experience.

SMITH "CUP-DEFENDER" FINISHES

EDWARD SMITH & CO. *Long Island City* N.Y.



Yo! Ho! Ho! every seaman knows Myers' *"The fine old "Planters' Punch" Jamaica Rum*

SEND FOR FREE RECIPE BOOK
39 soul-satisfying drinks—long and short, hot and cold. Cocktails, highballs, Planters' Punch and a dozen other delicious concoctions made with Myers', the world's finest rum. Get it where you buy your rum or write

FRED L. MYERS & SON
Founded 1879
444 Madison Ave., 27th Floor, New York City or the Sugar Wharf, Kingston, Jamaica, British West Indies

TO COOL OFF
Nothing like sipping a Myers' Rum Highball or a long, cool, delicious Planters' Punch.

TO WARM UP
Just a nip of Myers' straight or a Myers' Hot Rum Toddy to make a man feel snug

MYERS' *Fine Old* JAMAICA RUM

This advertisement is not intended to offer alcoholic beverages for sale or delivery in any state or community wherein the sale or use thereof is unlawful.

YACHT PAINT

PAINT does more than "beautify" your boat. Without paint your boat would soon rot and go to pieces.

Only the finest paint and varnish can stand the hard use they receive on a boat. And only the finest paint will give entire season protection to expensive hulls and fittings.

International Yacht Paints will give full protection for the entire season. It is poor economy to gamble with inferior products. And International Paints cost no more than brands of untried quality.

Send for our free color card

International Paints

International Paint Company, Inc.

21 WEST ST., NEW YORK, N. Y.

An Interesting Cruise

To reach the scene of the Gold Cup Races on Lake George, N. Y., a boat must be taken overland for a mile from Lake Champlain at Ticonderoga. We are informed that Albert Eichen, of that town, has equipment which will handle any stock runabout or small cruiser up to 35 feet over all. He carries liability insurance which covers the boats while in transit.

While larger boats cannot reach Lake George, Lake Champlain offers a most interesting cruising ground, with many historic spots along its shores. The Lake Champlain Yacht Club, at Burlington, and the Westport Yacht Club, at Westport, extend a cordial invitation to visiting yachtsmen to use their docks and moorings without charge.

Further information may be obtained from the Champlain Valley Council, Burlington, Vermont, or the Chamber of Commerce, Ticonderoga, N. Y.

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a.c.f. Boats Sold

L. B. Chapman, Manager of the Marine Division of the American Car and Foundry Company, reports the sale of an a.c.f. 30-foot cruiser runabout to Harry L. Horton of New York. The boat, which is powered with an 8-cylinder 110 h.p. Gray, has been named *Halaho*. Her home port will be at the New York Athletic Club, Travers Island, N. Y.

An a.c.f. 36-foot twin screw cruiser has been sold to William Hagedorn of New York City. She is powered with a pair of Chrysler Crown direct drive engines and has been named *Tillie II*. Her home port will be at the Harlem Yacht Club, City Island.

A 30-foot a.c.f. single cabin cruiser, with a Gray 6-72 engine, has been sold to C. M. Whitmore of Bellerose, Long Island. She has been named *Esther W II*.

V. W. Van Aken of Birmingham, Alabama, has bought an a.c.f. 24-foot cruiser powered with a Gray 6-56 motor. She has been shipped to Fort Meyers, Florida.

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New Waterproof Adhesive Plaster

Useful as adhesive plaster has been about a boat, there has always been some difficulty in regard to sticking qualities because of moisture or contact with water. Johnson & Johnson of New Brunswick, N. J., surgical goods manufacturers, offer a new type of adhesive plaster for first aid use, either for boatmen or for boats. This new Drybak Adhesive Plaster has a backcloth that is absolutely waterproof. Minor repairs below the water line on canoes and small boats can be made as it will stick in spite of salt, sea or other damp air. Drybak has a smooth backing of suntan color so that it is inconspicuous and will keep clean longer than the usual adhesive. It may be painted over with either regular paint or lacquer.

It is safe and efficient for personal and first aid use and is supplied in metal cartridge containers for convenience and cleanliness. Drybak Adhesive Plaster is also used in making Band-Aid — ready to use bandages consisting of a strip of adhesive with a gauze pad attached — for dressing minor injuries. These should be included in every medicine locker.

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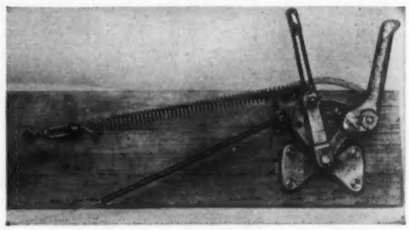
New Gadgets for the Yachtsman

The Elliott automatic buoy, designed to facilitate picking up a mooring, is now offered by Wilcox, Crittenden & Co., Inc. No boathook is used but a line with an eye in one end is made fast and the eye slipped over the pole on the buoy as it comes alongside. The eye is caught under one or more of the four hooks at the base of the pole, the buoy is pulled aboard after the yacht has swung, and she is moored as usual. The pole is readily removed before taking the buoy aboard. Its tube extends through the buoy, stiffening it, and the colored flag makes the mooring easy to find even in a crowded anchorage. The buoy is fitted with a rubber buffer to prevent damage to topsides or deck when hauled aboard.

Two new types of automatic shut-off throttles, used and approved by racing drivers, are also offered. The side plate



Side plate type of self-closing throttle

throttle is similar to the popular W-C type with a strong, rigid grip handle added so that the throttle is operated by opening or closing the hand without arm movement or letting go the grip. A bronze spring, attached to the throttle lever and the side of the cockpit, works the automatic shut-off, a bronze turnbuckle making it easy to adjust the spring tension. These new throttles will stay half open for starting but snap shut instantly if released when full open.

The deck type throttle has upper and lower deck plates, rigid grip handle, spring and turnbuckle and keeps the Bowden wire under the deck. Both of these throttles are made of bronze with especially strong vanadium bronze levers, are guaranteed not to break, and meet the requirements of the racing commission.

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Gray Sea Scout Gains Friends

A number of builders have selected the Gray Sea Scout engine as standard power for auxiliary installation, the latest being the Baltzer Boat Co. of Medford, Mass., which has chosen this compact 4-cylinder machine as the power plant for its 26-foot Quoddy sloop. The Sea Scout develops 16 h.p. at 2000 r.p.m. and is a low priced, medium duty, economical engine. Electric starter has been made optional equipment at small extra cost.

Before You BUY Your Engine See the BUDA Line!

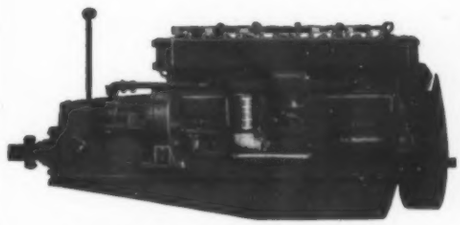
There is a BUDA for Every Boat!

YOU'LL never know what an engine manufacturer can do for you unless you ask. Buda Engineers have been helping boat owners solve engine problems and speed problems for years. Buda engines are designed and built for marine service under the complete direction and control of Buda Engineers—they are heavy duty—large proportioned—high speed—engines that are dependable in year after year service—and they are complete, nothing else to buy. Storage battery, instrument panel with indirect lighting, oil drain suction pump, exhaust flange, backfire protector, fuel pump, carburetor drip pan, suction pipe to insure crank-case ventilation, 6-volt generator, 6-volt starter, battery distributor and coil, lifting rings and tool kit are all standard equipment—and back of Buda engines is Buda help—friendly help that will assure the right power plant to secure the speed and results you desire.

Talk to your friends that have Budas in their boats—see a Buda in operation, if possible—tell us what your boat is and let our nearest representative or our engineers help you. Write today!

Models H.M. 173 and H.M. 205. 4 cylinders — 48 and 57 h.p.

Models H.M. 260 — H.M. 298. 6 cylinders — 70 and 81 h.p.



Models K.M. 369, K.M. 393, K.M. 428, L.M. 468, and L.M. 525, 6 cylinders 96, 101, 105, 111 and 121 h.p. with double ignition.

THE BUDA COMPANY
HARVEY (CHICAGO SUBURB) ILLINOIS

Atlantic Coast Distributors

Bowler Holmes & Hecker Co., Inc., 259 Greenwich St., New York City, N. Y.
Rapp-Huckins Company, Inc., 138–148 Beverly St., Boston, Mass.
Johnson & Towers, Inc., 126 Arch Street, Philadelphia, Pa.
H. E. Caulfield, St. Petersburg, Fla.
Gibbs Gas Engine Co., 26 S. Main St., Jacksonville, Fla.
Forest E. Johnson, 2932 Center St., Coconut Grove, Fla.
Thompson Fish Co., Key West, Fla.
Willard B. Tull, 512–514 E. Pratt St., Baltimore, Md.
Curtis Marine Co., Inc., 554 Front St., Norfolk, Va.
MacDonald Boat Yard, Daytona, Fla.
Daniels Bros., Fort Myers, Fla.
G. T. Backus & Son, Fort Pierce, Fla.
Gas Engine & Electric Co., 280–282 Meeting St., Charleston, S. C.
Stewart S. Sills, Sodus Point, N. Y.
Eau Gallie Boat Basin, Eau Gallie, Fla.

Middle West Distributors

Leonard Thompson, Inc., 500 E. Jefferson, Detroit, Mich.
Power Equipment Company, Nelson Bldg., Memphis, Tenn.
Chas. H. Wehner, 2142 Railway Exchange, St. Louis, Mo.
Wm. C. Anderson, 2009 Farragut Ave., Chicago, Ill.
Black's Machine Shop, Port Clinton, Ohio
R. W. Harrison Boat Works, 3828 Summit St., Toledo, O.
Schmidlapp Marine Co., Inc., 708 Race St., Cincinnati, Ohio
Covert Boat & Engine Co., 1330 McGee St., Kansas City, Mo.
J. B. Welch, Inc., 3148 N. 31st St., Milwaukee, Wis.

Gulf Coast Distributors

Peden Company, Houston, Texas
Higgins Industries Inc., 1755 St. Charles Ave., New Orleans, La.

9 Models with or without Reduction Gear 48 to 121 h.p.

BUDA MARINE ENGINES

Diesel or Gasoline

FINE BOATS DESERVE FINE ENGINES

BARBASOL fills the bill of brush and mug—

gives a better shave, to boot

WET your face, spread on Barbasol, and sing a song while you shave:—

"Many old mugs are asleep in the deep . . ."

Now rub the remaining cream into your skin, and there you have it—the smoothest, cleanest shave a he-man ever had.

And the quickest, too. Barbasol saves a good two minutes' time—no brush, no lather, no rub-in!

What's more — whether you use it with cold water or hot, with salt or fresh—Barbasol wilts the toughest whiskers like tender hearts before a sailor's glances, and leaves your skin as smooth and soft as Mary's little lamb.

Economical, easy to carry. Get yourself a tube of Barbasol at any drug store, slip a Barbasol Blade into your razor, and give yourself the finest shave you ever had.

THE BARBASOL COMPANY
Indianapolis, Indiana

Barbasol presents EDWIN C. HILL, *news commentator, C. B. S. See local newspapers for time*

BARBASOL BLADES
5 for 25¢

A good, honest blade. That's what Barbasol set out to make, and that's what we've got to sell—a brilliant new blade, sharp as an ensign's tongue, true as the flagship's Colors. On sale wherever Barbasol is sold.

FOR MODERN SHAVING: NO BRUSH · NO LATHER · NO RUB-IN

Yacht Charters

The following recent charters have been reported by Tams, Inc., of New York:

The 135-foot twin screw Diesel yacht *All Alone*, chartered for three months to Dr. Ogden M. Edwards, Jr., of the New York Y. C. She is one of the few fast Diesel cruisers and is powered with two 500 h.p. Winton engines, giving her a speed of 19 miles per hour.

The 99-foot twin screw houseboat *Ambassadress*, chartered for two months to a prominent New Haven yachtsman.

The 130-foot offshore cruiser *Naroma*, chartered for part of the winter season to a member of the New York and Eastern Yacht Clubs.

The 54-foot motor cruiser *Sacando*, for part of the winter season to a resident of Tuxedo Park.

The 135-foot Diesel yacht *All Alone*, chartered for all of this summer to a prominent member of the New York Y. C.

The 45-foot auxiliary *Sequoia* for June, July, August and September to U. Z. Reed, Jr. of New York.

The 104-foot twin screw Diesel yacht *Lanakila* sold for the Estate of Frederick B. Lovejoy to C. J. Root, of Terre Haute, Ind.

The 60-foot Elco cruiser *Amron*, built in 1932, has been chartered for Mrs. J. S. Ferguson to John H. McFadden, Jr., for June and July, with an option of extension.

The 100-foot twin screw gasoline houseboat *Ambassadress* chartered for Alexander C. Kittel, for use in Florida waters, to a prominent New Yorker.

The 66-foot twin screw cruiser *Paula Louise* chartered for the month of May for use in Florida waters to John H. McFadden, Jr.

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Increased Activity

Reports from Peirce & Kilburn, Inc., like those from other yachting centers, promise increased activity this summer. Orders for fitting out indicate that hardly a boat stored in the yard will remain on the beach. Many famous yachts have been cared for by this organization, among them such craft as *Argonaut, Palestine, Tamerlane, Thoroughbred, Chantey, Constance, Quisset, Diana, Kalmia, Kittiwake, Malolo, Mandoo, Margelou, Querida, Rhodos, Sally Anne, Shearwater, Snarleyow, Nina, Lynx, Chance* and *Ingomar*. During the year between 300 and 400 boats are serviced.

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New Texaco Booklet

The third edition of "Make Knots With Texaco" has just been published by the Marine Sales Division of the Texas Company. Lubrication, care of engines, laying up, fitting out, and many other power boat problems are covered by articles written by Texaco's staff of technical experts. The series of charts, showing lubrication specifications for all inboard and outboard engines, has been revised and brought down to date. Copies of this useful publication will be mailed free to applicants.

Reg. U.S. EVERDUR Pat. Off.

PISTON FINISH
SHAFTING • RODS
BOLTS • WASHERS
SCREWS • LAG
AND HANGER
SCREWS • MACHINE
SCREWS AND NUTS

IMMEDIATE STOCK DELIVERY
TOBIN
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BRONZE SHEETS
AND TUBES • •

SEA SLED
Reg. U. S. Pat. Off.
LICENSED UNDER HICKMAN PATENTS
Extremely seaworthy 22 ft., 26 ft. and 28 ft. boats with Hall-Scott, Scripps, Chrysler and Kermath installations.

Model 13	Outboard hull, the safest general service outboard boat in the country.	$70
Model 16	Outboard hull, the most seaworthy and successful small boat with automobile drive and full equipment	$140
Model 18	Convertible outboard cruiser.	$395

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Telephone ELdorado 5-3000 Extension 1862

For a Ship Shape Patch
ARISTOCRAT
FABRIC CEMENT
This will make a strong, flexible, weatherproof patch on sails, deck covers, dungarees and awnings. Completely eliminates sewing. "Once together always together" when you use Aristocrat Fabric Cement.
Free sample sent upon request
COOLEY FINISHING COMPANY, INC.
Pawtucket, R. I.

Spar Varnish
TUNGSPAR
The aristocrat of marine varnishes. Gives a beautiful pale finish. Durable. Will not turn white.
CAW-SPAR
Made with 100% Bakelite Gum. Tough, durable and good looking. Will not turn white.
Write for further details.
Send 12 cents in stamps for valuable Handbook on Boat Painting
C. A. Woolsey Paint & Color Co.
Quality Products Since 1853
JERSEY CITY, N. J.

Alden Schooner
Furnans' Yawl
Herreshoff Fish Class

While cruising this summer make "the midway yard" between New York and Boston your headquarters. Convenient for the Trial and International Cup Races. Come ashore and inspect the yard. You will find points of interest and a chance to have lunch or dinner at the Galley.

PEIRCE & KILBURN
• INC •
NEW BEDFORD MASSACHUSETTS

"NO WEAR AFTER 3 YEARS' SERVICE"

"Increase Speed, Reduce Expense"

"World's mileage record for bearings"

"Used on every boat we build"

"OUTWEAR OLD BEARINGS 30 TIMES"

"ALL BEARING FEAR NOW REMOVED"

TYPICAL of statements made by hundreds of ship owners, these show why Goodrich Cutless Rubber Bearings are becoming standard equipment on boats of every type, plying all waters.

Cutless Bearings last 2 to 12 times longer than any other bearing made. Your saving in dry-docking alone will pay for these bearings; your saving in bearing and shaft replacements will be an extra dividend, free.

Made of soft rubber, perfectly lubricated by water, Cutless Bearings allow the shaft to deliver more power with less vibration. In addition, the soft rubber surface prevents scoring of the shaft when sand is washed into the bearing.

Write for performance records on boats comparable to your own.

LUCIAN Q. MOFFITT, INC., EXCLUSIVE DISTRIBUTORS
504 PEOPLES BANK BUILDING, AKRON, OHIO
(Export, International B. F. Goodrich Company, Akron, Ohio)

Goodrich
Cutless
Bearings

Sport Fishing For Summer Yachtsmen

(*Continued from page 72*)

The reels are equipped with adjustable "drags," by which the tension on the line may be increased or decreased at will. To complete the outfit, add an assortment of spoons, metal squids, hair lures, feather lures, swivels, a long-handled gaff, wire pliers, a coil of leader wire and an old pair of cotton gloves. Most of the better grade fishing tackle shops will give you reliable advice and service as to spoons, lures, etc., suitable for each locality. The major purpose of the wire leader is to prevent the fish from fraying the line with fins or tail during its headlong rushes.

This sort of fishing is done by trolling from a moving boat at speeds of four to eight knots, varying with ordinary cruising conditions. The bait is trolled some fifty feet astern. Most of the fish mentioned are surface feeders, and some of them (particularly bonito, tuna, and dolphin) strike indiscriminately at spoons, hair and feather lures, doing so in a manner lacking in *finesse*. The marlin, on the other hand, has a different technique. Without teeth, he depends on his tremendous speed; he overtakes his prey, crippling it with his bill or sword and then swallowing it at leisure, after the manner of the Florida sailfish. The theory, then, in angling for marlin is to imitate nature; when you feel the "tap" on the bait, allow it to drop back immediately for about fifty feet before attempting to set the hook. Marlin, however, do not strike so readily on artificial baits as on cut or fresh bait. The boat, of course, should be slowed down or stopped when a large fish is hooked.

In connection with the speed and power of the larger game fish, many tall tales have been told. In Florida, a few years ago, we decided to make tests for ourselves, adopting the simple expedient of placing a series of markers 88 feet apart on our lines, on the basis that a mile a minute is 88 feet per second. In a great number of tests with sailfish and marlin (or at least more than a hundred) the average unbroken "run," or rush, ripped off 150 yards, or about five of our "lengths." The average time was close to five seconds, though, on shorter dashes, it was relatively faster, showing that these fish actually develop speeds in excess of 60 miles an hour. This is mentioned to indicate the tremendous strain to which reel and line are subjected, and the paramount importance of good equipment to withstand such shock.

A peculiar fact about the sport — still very young — is that, when all is said and done, little is known to science about the larger species. I refer, in particular, to those found on our Atlantic seaboard. Where they breed, whence they come and where they go, is merest conjecture. Theories, based on experiences of competent observers, live only long enough to be knocked into a cocked hat. All that is known is that the fish appear off Florida and the Bahamas in late winter, migrate northwards during the spring months, usually in company with schools of mackerel — on which they feed — to disappear off Nova Scotia in the late fall. Where do they go? Furthermore, observations instituted last year by Captain Walter Baker (Mrs. Grinnell's skipper, and a close student of the game) showed that of 2800 broadbills docked commercially at Louisburg, N. S., all were males. Where, we ask, were the females of the species? Tiny broadbills (of less than ten inches over all length, but perfect specimens in every detail) have been taken from the stomachs of dolphin caught in Florida waters and have been preserved by Miami taxidermists, yet catches of adult broadbills are extremely rare in those southern waters. On the other hand, tuna and marlin of enormous size have been breaking the sturdiest of

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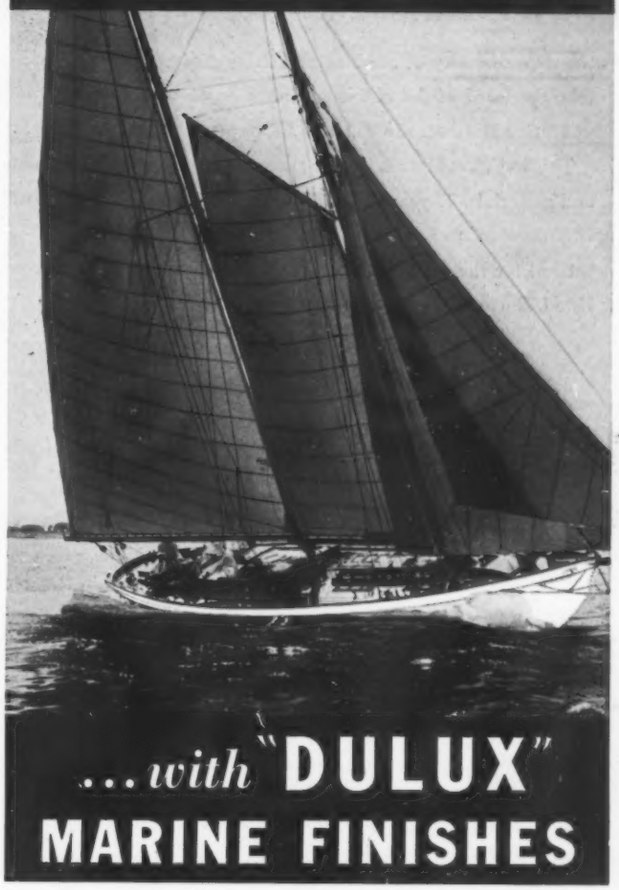

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Fig. 895 Hi-Duty Muffler

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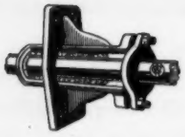

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tackle in the nearby Bahamas, especially this spring, doing so with consistent ease.

Too much emphasis cannot be placed on the advice that inexperienced anglers should not attempt to fish for the really big fellows unless it be with specially designed and specially equipped boats, special tackle and an experienced professional guide. With all these facilities, and with all other factors in favor of the angler, the odds remain with the fish. Consider the case of Mrs. Grinnell and her record broadbill of last summer. Blessed with courage and strength, unsurpassed in experience, with the best of boats, skippers and equipment, it required twenty hours of continuous struggle to bring her fish to gaff. And there's no encouragement from the outside. In big game fishing, there's just you, your guide, your quarry, and an awful uncertainty.

After more than thirty years of fishing, salt water and fresh, in tournaments and otherwise, on both coasts of America and abroad, I have come to one conclusion — and the only one which, to me, seems absolutely incontrovertible — namely, that big fish don't care who hooks them. It is the one sport in which the dub stands as good a chance as the seasoned expert. I said "who hooks them"; boating your fish is another matter, and that, perhaps, is where experience counts. But, beginner or otherwise, here's to you this summer — "Tight Lines!"

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A Seagoing Clearing House

SOMETHING new in yachting organizations was launched last winter, with the birth of The Corinthians, which, it is expected, fill a real need and prove of advantage both to the yacht owner and to those experienced amateur sailors who want to get afloat, yet lack the facilities to do so in their own boats. At least that is the hope of its sponsors.

The primary purpose of the organization is to maintain a membership clearing house system through which those members who do not have boats may come in contact with those members who own boats and who frequently are looking for one or more amateur crew members for cruises or for racing. The association, developed through a series of meetings of men deeply interested in the sport, will duplicate in the United States one of the functions of the Little Ship Club, in London. Much of the Corinthians' procedure has been modeled upon that of the British organization.

Already, some one hundred yachtsmen in the vicinity of New York have enrolled, the membership being about equally divided between yacht owners and non-yacht owners. The organization is, of course, non-commercial in character, the membership dues being nominal and the purpose being solely in the interest of the members themselves.

It would seem, at first glance, that this movement is not fulfilling any function that a yacht club could not and should not fill. However, most yacht clubs make no effort to bring members together, especially boat owners and those who do not own boats, and maintain no register where an owner desiring to fill out his crew could apply. Those back of the new organization are fully alive to the difficulties of bringing together strangers as shipmates, even for brief periods, and it is frankly recognized that the first year will be more or less in the nature of an experiment. Therefore, particular attention will be paid to the question of personality as well as to professional qualifications. The idea is certainly worth a trial, and we wish the new organization the success that its objective warrants.